JPRS 80385

23 March 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 208

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 80385

23 March 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 208

CONTENTS

WORLDWIDE AFFAIRS

Laos-USSR Space Communications Link Inaugurated
(G. Kudryavtsev Interview; PRAVDA, 1 Mar 82)............. 1

Details on 'Atlantis' Cable Meeting Noted
(Sophie Chegarey; FRATERNITE MATIN, 4 Feb 82)............ 3

Briefs
Bahraini-ROK News Agreement 5

ASIA

INDIA

Briefs
Satellite To Be Launched 6
Satellite To Study Equatorial Atmospherics 6

NEW ZEALAND

Consortium Formed To Introduce Cable Television System
(THE EVENING POST, 11 Feb 82)......................... 7

PEOPLE'S REPUBLIC OF CHINA

Briefs
Differential Transfer TV Station 8

REPUBLIC OF KOREA

Briefs
Telecommunications Satellite Research 9

LATIN AMERICA

BERMUDA

Briefs
New FM Station 10

COSTA RICA

More on Radio Frequency Change Plans
(LA NACION, 18 Feb 82)................................... 11

GUATEMALA

Briefs
Subversives Interfering Radio Transmissions 12
Five Radio Stations Interrupted 12

NEAR EAST AND NORTH AFRICA

KUWAIT

Third Satellite Ground Station Opens
(ARAB TIMES, 28 Feb 82)................................. 13

SUB-SAHARAN AFRICA

IVORY COAST

Administrative Council of INTELCI Meets, Reports on Budget
(FRATERNITE MATIN, 16 Feb 82)........................... 14

NIGERIA

Briefs
More on TV Allocations 15

SOUTH AFRICA

Viewership Survey on TV Channels 2/3 Reported
(Stan Maher; RAND DAILY MAIL, 17 Feb 82)................ 16

ZIMBABWE

Briefs
Unlicensed Radio, TV Owners 18

USSR

Exhibits at Svyaz'-81 Show in Moscow
(N. Nikol'skiy; AVTOMATIKA, TELEMEKHANIKA I SVYAZ', Jan 82).. 19

Comparison of Parameters of Cable and Radio Relay Circuits
(N. E. Popova, et al.; VESTNIK SVYAZI, Dec 81)............ 33

WEST EUROPE

SWEDEN

Swedish Space Firm Chief Discusses Satellite Development
(Sophie Petzell; SVENSKA DAGBLADET, 16 Feb 82)........... 38

LM Ericsson Preparing New Telecommunications Products
(Johan Myrsten; SVENSKA DAGBLADET, 16 Feb 82)............ 42

Briefs
First Ericsson Teletex Order 46

LAOS-USSR SPACE COMMUNICATIONS LINK INAUGURATED

PM081131 Moscow PRAVDA in Russian 1 Mar 82 p 4

[Interview with G. Kudryavtsev, first deputy minister of communications, by L. Chausov, in Moscow, date not given, and Ye. Fadeyev dispatch: "Moscow Vientiane Space Bridge"]

[Excerpts] Vientiane--An antenna system soars into the blue tropical sky: the capital of the Lao People's Democratic Republic [LPDR] has acquired a direct link with Moscow. "Lotus-2"--a ground station of the "Intersputnik" space communications system--presented as a gift to the Lao people by the Soviet Union, has been commissioned. It was erected by construction workers of the two fraternal countries. Henceforth reliable telephone and telegraph communications and the reception of television broadcasts from the USSR and other socialist community countries will be ensured via space.

And so a "window on the world" from space has been flung open. The first television screens have lit up bringing people news from the land of the Soviets and other fraternal states. In concluding my reportage I should like to say to those who are reading these lines: This is the first time your correspondent has sent an item to the editorial office by telephone. The "Intersputnik" space link has started work. [end of Fadeyev dispatch]

Specialist's Commentary

On the eve of the commissioning of the space communications station in the LPDR, PRAVDA correspondent L. Chausov talked in Moscow with G. Kudryavtsev, USSR first deputy minister of communications, about the development of the international "Intersputnik" organization. Here is what he said:

The ramified system of communications which henceforth will include "Lotus-2" is an organic part of "Intersputnik." The technical side of the matter has been reliably ensured by the efficient functioning of the Soviet space communications complex. Here satellites in the "Gorizont" series are being used with the internation ["statsionar"] designation.

The new "Lotus-2" station situated in Laos is of the same type as the station constructed in Vietnam with the USSR's technical assistance. Similar space communications ground stations on the territory of other socialist countries are helping to satisfy better and better the growing requirements for contacts and the exchange of information within our community. The number of "Intersputnik" members is growing. Thus its system has already been joined by Afghanistan where a satellite communications station has already been commissioned and will also serve the development of international contacts. It should be noted that "Intersputnik" is an organization open to all countries anxious to use space for peaceful purposes, for the benefit of mankind.

CSO: 5500/2141

DETAILS ON 'ATLANTIS' CABLE MEETING NOTED

Abidjan FRATERNITE MATIN in French 4 Feb 82 p 4

[Article by Sophie Chegaray: "On 1 August: Entry Into Service of 'Atlantis' Submarine Cable System"]

[Text] Having met since Tuesday, 26 January, at the Hotel Ivorie, the General Committee for the construction of the submarine cable from South American to South African and Europe completed its work last Friday [30 January]. According to a communique from the director general of INTELCI [International Telecommunications of the Ivory Coast], the meeting took place under the best conditions, and important decisions were reached, particularly concerning the maintenance of the system whose entry into service is provided for next August.

It was in July, 1979, that there was signed, between different countries of Africa, South America, and Europe, an agreement for the construction of a high capacity submarine cable to link these three continents by telephone. Called the "Atlantis System," this project includes 10 promoters: Argentina, Brazil, Great Britain, France, Federal Republic of Germany, Switzerland, Italy, Portugal, Senegal, and Ivory Coast.

This large-scale project will make it possible to establish or strengthen telecommunications between these three continents. The Ivory Coast, which is experiencing an ever-growing demand for international communications could not help but participate in such a project.

Recalculation of the Cost

The eighth meeting of the General Committee for the Construction of the Atlantis Submarine Cable System was held in Abidjan and was presided over by Magales, from Brazil. A number of points were on the agenda: the promoters first of all had to consider in connection with the financial problem a recalculation of the cost of construction, as this was regarded as necessary. Now amounting to about 53 billion CFA [African Financial Community] francs, the new investment budget needed to be adopted by the 10 promoters, clearly raising the question of the participation of each of the countries.

The General Committee furthermore considered the technical question of the progress of the work underway. In this connection it was able to note that the construction calendar had been respected by the two construction companies involved and that the tricontinental communications project could enter into service as of 1 August, as planned.

It is a British company, STC [Standard Telegraph and Cable Company], which has been charged with the laying of the cable between Brazil and Senegal, while the section between Senegal and Portugal has been entrusted to a French company. Of course, these two projects were previously opened to international bidding before the contracts were awarded.

In Case the Cable Is Cut...

Another important point was raised by the General Committee at its meeting in Abidjan: the eventual extension of the use of the Atlantis system to other countries which did not sign the initial contract. This principle and arrangements for the use of this large capacity cable led to extended discussions.

Finally, there remained the essential question of the use and maintenance of the Atlantis system. Who would take action in case of a cutting of the cable (an event which should always be considered)? On this point the members of the General Committee agreed on the principle of ordering a supplementary study providing for an emergency plan. After 4 days of intensive work, the representatives of the 10 promoting countries completed their work Friday evening [29 January].

On the previous evening [28 January] they were the guests of the city of Yamoussoukro. This included a visit to the city and its well-known facilities and also a visit to a pineapple plantation. These were the principal stages in this recreational day which let these visitors, who had come from three continents, to get an idea of development in Ivory Coast fashion.

The next meeting of the General Committee of the Atlantis system will be held in Switzerland in July, 1982.

5170
CSO: 5500/5968

BRIEFS

BAHRAINI-ROK NEWS AGREEMENT--An agreement was signed here today between the Gulf news agency [WAKH] and the ROK news agency YONHAP. The agreement was signed by Nabil Ya'qub al-Hamar, WAKH director general, and (Kim Seong Jin), YONHAP director general. Under this agreement, the two agencies will exchange news reports and disseminate them in the ROK and the Arab Gulf region. [GF091239 Manama WAKH in Arabic 0950 GMT 8 Feb 82 GF]

CSO: 5500/2152

BRIEFS

SATELLITE TO BE LAUNCHED--India's multipurpose satellite INSAT I is to be launched on the 8th of next month. It is designed to have a nationwide coverage of telecommunications, relay of radio and television transmissions and collection of meteorological data. This was stated by Prime Minister Mrs Gandhi in the upper house of Parliament today. Mrs Gandhi said INSAT I will be geostationary and will be in two parts--IA and IB. The first to be launched on the 8th of next month is IA. [Text] [BK111445 Delhi General Overseas Service in English 1330 GMT 11 Mar 82]

SATELLITE TO STUDY EQUATORIAL ATMOSPHERICS--The Vikram Sarabai Space Center [VSSC] at Tumba near Trivandrum in the southern state of Kerala today successfully launched a centour rocket to study the atmospheric conditions in the equatorial region. According to a VSSC spokesman, the purpose behind the launching is to study the electronic concentration about the equatorial. The rocket, which rose up to a height of 126 kilometers, carried a payload of 71 kilograms. This has been a joint effort of India, the Federal Republic of Germany and Austria. [Text] [BK111505 Delhi General Overseas Service in English 1330 GMT 11 Mar 82]

CSO: 5500/2152

CONSORTIUM FORMED TO INTRODUCE CABLE TELEVISION SYSTEM

Wellington THE EVENING POST in English 11 Feb 82 p 6

[Text]

Mr Gavin Ellis has been appointed manager of Cablevision NZ Ltd, a consortium formed to introduce a cable television system to New Zealand.

Mr Ellis was formerly a member of the editor's department of the "New Zealand Herald", published by a member of the consortium, Wilson and Horton Ltd.

The other partners in Cablevision NZ Ltd are Tolley Industries Ltd, Wellington-based cable manufacturers, and J Scott and Co Ltd, a Dunedin-based firm of timber importers.

Cable television — a multi-channel system which carries television signals into homes, hotels and business houses via coaxial cables — is expected to markedly increase the range of entertainment and information available on New Zealand television screens.

The system is well advanced in North America where up to 100 channels can be transmittd via cable. In Canada, cable television reaches 60 percent of homes and in the United States almost 30 percent of television set owners subscribe to a cable system.

A series of cable pilot schemes have been established in the United Kingdom and an inquiry into the introduction of cable services is under way in Australia.

CSO: 5500/9026

BRIEFS

DIFFERENTIAL TRANSFER TV STATION--On the highest peak at Yichun City inside Xinqing District on the summit of Laobai Mt., a differential transfer TV station has been set up. Text broadcasts were already carried out before Spring Festival. The picture was clear and the special effects relatively good. This differential transfer TV station has been funded by the four forestry bureaus of Xinqing, Hongxing, Dongfeng, and Wuyiling as well as by the Xinqing Lumber Processing Mill, Xinqing Electric Generating Plant, and the Wulaga Gold Mining Bureau. [By Wang Jiarong [3769 1367 2837]] [Text] [Harbin HEILONGJIANG RIBAO in Chinese 1 Feb 82 p 2]

CSO: 5500/4011

BRIEFS

TELECOMMUNICATIONS SATELLITE RESEARCH--Telecommunication satellites will be developed in the foreseeable future to remove blanket areas before the 1988 Seoul Olympic Games. Minister of Culture and Information Yi Kwang-pyo said yesterday the Ministry of Communications and the Korea Broadcasting System (KBS) have started preliminary research into the development of telecommunication satellites. In reply to lawmakers' questions in a plenary National Assembly session, Yi also said the government will reduce commercials on the state-run broadcasting system. The government acknowledges the need to create a large-scale national art museum to firmly establish the legitimacy of the nation, he said. The government has sent 17 different kinds of books to Korean residents in Communist China through third countries, and plans to send nonpolitical publications to Korean residents in other communist countries, he disclosed. [Text] [SK070243 Seoul THE KOREA HERALD in English 7 Mar 82 p 1]

CSO: 5500/2141

BRIEFS

NEW FM STATION--The Home Affairs Ministry has granted an FM braodcasting licence to Bermuda's newest radio station, VSB. Last night the station's manager Mr. Ron Evans said that now VSB would have to wait until the end of the month to hear whether it had planning permission to erect a tower at Boaz Island--and it could take a year before the FM station would begin broadcasting. Mr. Evans, however, would not say exactly what the station would broadcast if it gets onto Bermuda's airwaves. "I wouldn't answer that because ZBM would love to know. That's a secret--even my boss doesn't know what plans I've got in my head." But he did say that if his plans go through his FM station would be the only live FM station on the Island. He hopes that he can have an FM frequency parallel to their AM 1450 khz so that listeners would simply have to flick the switch to tune into FM. Meanwhile Government has deferred until the end of January next a decision on VSB's application for a second AM station [Hamilton THE ROYAL GAZETTE in English 4 Feb 82 pp 1, 3]

CSO: 5500/7523

MORE ON RADIO FREQUENCY CHANGE PLANS

PA251934 San Jose LA NACION in Spanish 18 Feb 82 p 10A

[Text] A plan designed to stop foreign radio penetration, especially in the northern part of the country, will be implemented by the Government Ministry as of 1 March.

The information was furnished by Deputy Government Minister Harry Wohlstein. He added that on that day an executive decree will be enforced to increase AM frequencies by multiples of 10.

According to the official, this will make available two frequencies that will be assigned to the church for broadcasting to the northern part of the country and to the Atlantic and Pacific coasts.

The purpose of this is to block so-called "radio penetration," especially of ideological and cultural programs from Nicaragua.

According to the deputy minister, in radio broadcasting there are no barriers and it is very easy to bring into Costa Rican homes programs that do not represent out national culture and customs.

The plan was set up following conversations with the National Chamber of Radiobroadcasting in coordination with the National Office of Radiobroadcasting.

Regarding the kind of programs that the CURIA will broadcast on those frequencies, there is an agreement that cultural and "popular" type programs will be given preference.

These frequencies will not be used for commercials or for business activities.

In conclusion, it was emphasized that it is necessary to take these measures because not only Nicaraguan, but also Cuban, Mexican and Honduran radio broadcasts are beamed toward Costa Rica.

CSO: 5500/2145

BRIEFS

SUBVERSIVES INTERFERING RADIO TRANSMISSIONS--The General Directorate of Radio and Television Broadcasting has confirmed that subversives have modulated frequency equipment with which they are interfering in the transmissions of the country's most important stations. A circular on this has been sent to the directors of the country's radio stations. As is known, unidentified individuals have interfered in the regular transmissions of some of the country's most important radio stations, including Radio Nuevo Mundo and Radio Cinco Sesenta. On Tuesday, shortly before 1300, there was interference during Radio Nuevo Mundo's transmission of the second edition of "The Independent" newscast. Yesterday afternoon, there was interference in the transmissions of Radio Cinco Sesenta. According to the reports obtained by our newsmen who immediately went to the studios of Radio Cinco Sesenta on 5th Avenue and 14th Street in Zone 1, the station had not been physically occupied. The station personnel said that a message different from the station's program suddenly came on in its frequency. [Text] [PA252258 Guatemala City Radio Nuevo Mundo in Spanish 1200 GMT 25 Feb 82]

FIVE RADIO STATIONS INTERRUPTED--Five radio stations of Guatemala City were interrupted again this weekend and messages against the government were broadcast. One of the affected radio stations was Radio Progreso. The others were Radio Nuevo Mundo, Radio Sonora, Radio Cinco Sesenta, and Radio Continental. All these radio stations had been interrupted before for the same purposes. In none of the cases, which took place yesterday and today, was there any attack on the studios of the radio stations. The guerrillas once again used a powerful modulated frequency transmitter to impose their signal on the affected radio stations. The interferences took place at different hours. The radio stations were broadcasting their regular program when all of a sudden antigovernment messages from the Armed People's Revolutionary Organization were aired on their frequencies. [Excerpts] [PA020437 Guatemala City Radio-Television Guatemala in Spanish 0400 GMT 1 Mar 82]

CSO: 5500/2145

THIRD SATELLITE GROUND STATION OPENS

GF020558 Kuwait ARAB TIMES in English 28 Feb 82 p 1

[Text] Kuwait, Feb 27--Kuwait today inaugurated its third satellite ground station, an official press release by the Ministry of Communications said. Like its two predecessors, the new 'earth station' is located in Umm Al A'ish, close to the border with Iraq.

Minister of Communications 'Isa Muhamad al-Masidi personally declared the station operational today in the presence of Undersecretary 'Abd ar-Rahman al-Ghunaym and other senior officials.

The new ground communications system is designed to cope with increasing demands on international communications between Kuwait and the rest of the world, it is being stressed. All the ground stations are linked to a network of satellites operated by INTELSAT (International Telecommunications Satellite Organization) founded in 1964. Kuwait had joined that organization in 1966.

The third station has been designed and built by Nippon Electric of Japan at a cost of KD2.7 million. Its initial capacity is 324 channels and its antenna is pointed to the Indian Ocean region satellite serving the countries of the region.

Ground stations dotted around the world serve as reflectors communicating signals of information to the orbiting satellites. Telephone calls, radio and TV broadcasts and other information can be conveyed by the satellite network. From the satellite, any information can again be re-transmitted to the ground stations.

CSO: 5500/2141

ADMINISTRATIVE COUNCIL OF INTELCI MEETS, REPORTS ON BUDGET

Abidjan FRATERNITE MATIN in French 16 Feb 82 p 3

[Article: "INTELCI: 8.5 Billion CFA Francs for 1981-82; First Meeting of Supervisory Council"]

[Text] The first meeting of the Supervisory Council of the International Telecommunications Company of the Ivory Coast (INTELCI) was held on Friday, 12 February, in the conference hall of the Ministry of Posts and Telecommunications, with its chairman, Minister of Posts and Telecommunications Kouassi Apete, convening the session.

The presence of many well-known personalities was noted, including that of Amadou Thiam, minister of information; the representative of the minister of economy and finance; the director general of the Autonomous Financial Fund [Caisse Autonome d'Amortissement]; the director general of telecommunications; etc.

The agenda of this council meeting included the following: examining the report of the 24th meeting of the Administrative Council, which took place on 10 December 1981; examining new administrative and management structures for INTELCI; examining the draft budget for fiscal year 1981-82.

This was the occasion for Tanoh Germain, chairman of the Administrative Council of INTELCI, to present documents concerning points included in the above agenda. After this presentation the council adopted the conclusions of the 24th meeting of the Administrative Council and approved the budget for fiscal year 1981-82, which balanced receipts and expenditures at 8.5 billion CFA [African Financial Community] francs, as well as the new administrative structure of INTELCI.

Furthermore, the council then considered the nomination of commissioners to examine the accounts of the company, on the one hand, and on the other hand recommended to the Administrative Council and to the Directorate General of the Autonomous Financial Fund that they ensure careful implementation of the budget for fiscal year 1981-82, regarding the general policy of economic recovery set out by the party and the government.

5170
CSO: 5500/5698

BRIEFS

MORE ON TV ALLOCATIONS--Commissioners for Information from the 12 states controlled by the UPN, NPP and factions of the PRP and GNPP have called on the Federal Government to allow states to be represented on the TV channels allocation committe. In a communique at the end of their one-day meeting in Benin on Friday, the commissioners said that as an interim measure, the Federal Government should urgently allocate more UHF channels to all states. They asked the Federal Government to take urgent steps to constitute the six zonal boards of the NTA to ensure effective direction and management. The conference endorsed the stand of chairmen of radio broadcasting stations in their states who were opposed to the proposed establishment of FRCN stations in the states. [Text] [Kaduna NEW NIGERIAN in English 23 Feb 82 p 16]

CSO: 5500/5717

VIEWERSHIP SURVEY ON TV CHANNELS 2/3 REPORTED

Johannesburg RAND DAILY MAIL in English 17 Feb 82 p 11

[Article by Stan Maher: "What's Right"]

[Text]

SIXTY percent of people in Soweto have access to a television set, which a third of them watch avidly for six or seven days a week.

Right or wrong?

It's right, according to the first survey, released this week, on viewership of the new TV2/3 channels, which are only a month old.

But this claim, as well as others, is disputed by some market research experts, who are sceptical of the results.

The survey, conducted for the advertising agency J. Walter Thompson by Interserv, reports a dramatic increase in viewing figures. And the agency says it confirms its initial advice to advertisers of the value of the new channels.

But market researchers question the accuracy of the survey, which is based on a quota sample of 158 people. One called it "a cheap way of doing the job".

'Optimistic'

An acknowledged expert said a 60 percent viewing figure in Soweto was very high, considering that black ownership of TV sets nationally "is only 3 percent".

"The figures in this new survey are far too optimistic," he said.

A university researcher said quota samples — the type used in the Interserv survey — could be useful, but could not be verified.

"You have a 50-50 chance of drawing a representative sample," he said.

The survey is based on interviews with 108 people in Soweto and 50 in other Reef townships — an area with a population conservatively estimated at 1.6 million.

Half the sample was male and half female, divided equally into people under and over 35 years of age.

The results of the survey have been widely published.

It says:

Sixty percent of Sowetans interviewed (and 46 percent in Reef townships) have access to a TV set, which 77 percent of them watch at home (Reef 56 percent). On average, nine people are present when the TV is on.

The audience viewing one or two days a week is said to be 30 percent (Reef 40 percent), three to five days a week 37 percent (Reef 38), and six or seven days a week 33 percent (Reef 22).

Fifty-six percent of Sowetans interviewed said they never watched on a Sunday (Reef 48). But 54 percent (Reef 54) said they watched TV for at least two hours on weekdays.

Sixty-one percent view for between two and five hours on Saturdays (Reef 52).

Black viewers overwhelmingly prefer TV2/3 to TV1, says the survey. Of the Soweto sample, 59 percent (Reef 76) watch TV2/3 compared with 38 percent (Reef 16) viewing TV1.

Bulletins

News bulletins were fourth in popularity among Soweto TV1 viewers and second favourite with Reef viewers. But on TV2/3, news bulletins ranked fourth. Seventy-seven percent of the Soweto sample (Reef 76) said they preferred programmes in the vernacular to those broadcast in English (Soweto 22 percent, Reef

24) or Afrikaans (Soweto one percent, Reef 0).

Forty-nine percent of Soweto viewers sampled found nothing irritating about TV1 (Reef 48). Those who did, found Afrikaans, music and English the main irritations.

A market research expert said the margin of error in a survey of this type was likely to be eight percent on any of the figures quoted — "way beyond the margin you could expect from a scientific survey".

"With a quota sample, the selection of the informants is in the hands of the interviewer," he said. It is a cheap way of doing research, but a lot of companies are doing it because scientific samples are expensive and take a lot of trouble to carry out.

"According to last year's AMPS survey by the industry, the percentage of viewers in Soweto was 8,2. In the survey, it is said to be 33 percent viewing six or seven days a we[illegible]nd 37 percent watching [illegible] four or five days a week.

"No ways. It's just not a proposition as far as I am concerned. The figure cannot have gone up by 400 percent. The AMPS survey also said that only six percent of Soweto households have sets. How can viewing figures have leaped to six out of every 10 people in seven months?

"Access to a TV set in this week's survey could mean anyone visiting a beerhall. I believe this definition is so broad, you can drive a bus through it. It's a bit naughty."

Interserv, which is not listed in the telephone directory, is a new company with a staff of two, Mr Oliver Ronaldson and Ms Rita Bartlett.

Ms Bartlett, an experienced professional researcher, said she did the research in 11 areas in Soweto, as well as in areas on the East Rand.

"We did a quota sample — this was to take the hassle out of market research," she said.

Asked whether a random sample of selected homes would not have been more accurate, she said: "Yes, but then you would have to have a much larger sample — probably one of 500. That is a lengthy and expensive way of doing it."

Commercials

Mr Dick Reed, media director for J Walter Thompson, stressed that the survey was "dipstick research" and said it did not attempt to be definitive about viewing patterns.

"Because of the time factor and the fact that we have commercials being shown now, we wanted a quick assessment," he said. "We wanted to get a feel about whether people are watching or not, whether their reaction is positive or not."

Mr Reed said Interserv's raw data was interpreted by J Walter Thompson's research director, Ms Barbara Ross.

"It is logical that black viewing will now be higher," he said. "We have two new TV channels of special relevance to black viewers. Electrification in Soweto has been speeded up and marketers of TV sets have been actively pushing sales since last year, because of the new channels. There is a lot of communal viewing."

He said Interserv had been chosen because, though new, "it had not only the efficiency, but the hunger and desire to do the survey quickly".

CSO: 5500/5712

BRIEFS

UNLICENSED RADIO, TV OWNERS--Bulawayo--Nearly a thousand people are being prosecuted here for not having valid radio or television licences. The acting senior public prosecutor, Mr Felix da Silva, said the prosecutions which began on Tuesday would go on until March 2. One woman, in tears, said her husband left for Selukwe--and took the licence with him. Another said the radio was not hers. "It was left by a friend." A young man said he was served with a summons for prosecution because "the licence inspectors saw a TV aerial outside my house. The TV was not there." Asked where it was, he said it was being examined by "TV experts" as he had bought it from South Africa. "I wanted to know whether it could function here first before buying a licence. But that was when I was served with the subpoena," he said. Another man said: "I forgot. I did not think it was that serious not to have a licence." They were each fined $5. [Text] [Salisbury THE HERALD in English 26 Feb 82 p 4]

CSO: 5500/5712

EXHIBITS AT SVYAZ'-81 SHOW IN MOSCOW

Moscow AVTOMATIKA, TELEMEKHANIKA I SVYAZ' in Russian No 1, Jan 82 pp 41-45

[Article by N. Nikol'skiy: "In the World of Radio Waves and Messages"]

[Text] In the present century of the scientific and technical revolution, human life and activity is inseparably connected with an increasing flow of widely varying information. Communications channels using a powerful arsenal of technical facilities ranging from "ancient" almost to modern satellite systems are penetrating everywhere. This is evident by the international "Communications Systems and Facilities" -- "Svyaz'-81" show which was held last spring in Moscow.

The Soviet Union was one of the biggest participants in this event. The variety of technical facilities in the Soviet exhibition included systems and equipment for satellite and radio relay communications, radio and troposcatter communications, television and radio broadcast.

For the Soviet Union, which occupies one-sixth of the earth's surface, the requirement for organizing communications covering such a large territory required that the Unified Automated Communications System YeASS be created. This radio electronic complex is already partially in place, and is being developed and improved in consideration of the requirements of all branches of the economy. The Unified System is being used to transmit various types of information: telephony, telegraphy, digital, facsimile; it supports radio communications and data transmission, and the dissemination of radio broadcast and television programs. The Unified System includes satellite, radio relay, cable and troposcatter communications links, and will include optical links in the future.

One of the most efficient types of communications included in the Unified System is satellite communications. Satellites are used here as relays which support communication with practically any point on the globe and near-earth space. The main advantages of these systems is the high performance and reliability of the communications channels, large capacity, the support of simultaneous communications of hundreds and thousands of subscribers on the ground, at sea and in the air, and relatively low channel cost.

The exhibits in the Soviet division of the show included models of the Ekran, Molniya-3 and Gorizont satellites. The Molniya-3 satellites, which operate in the centimeter band, have been in operation for about 7 years. The Raduga and Gorizont centimeter-band multi-trunk relays have been operating in geostationary orbit for a slightly shorter period. These satellites bear the international name of "Statsionar". These satellites are used for telephone and telegraph communications, for transmitting central television programs and newspaper columns throughout this country. The Orbita-2 satellite earth station network provides good reception and transmission quality.

The exhibits also included the Moskva-B satellite earth station which is designed for zonal television broadcast using the Gorizont satellites. This station receives television and radio programs on a 2.5-meter antenna. Television programming is relayed through an RTsTA-70R/12 relay over one of 12 USSR television broadcast channels, while radio programming is relayed through the relay facilities at the station site.

There are now 87 Orbita earth stations, about 1000 Ekran transceiving stations and 10 of Moskva stations. Thanks to satellite communications systems, more than 86% of our population can receive the first Central Television Program, and 90% of PRAVDA subscribers receive their paper the day it is published.

The Soviet section of the show also provided the opportunity for viewers to become acquainted with work in the area of Intersputnik International Satellite Communications System (MSSS). This system supports telephone, telegraph and facsimile communication, as well as transmission of television and radio broadcast programs via the Soviet Statsionar-4 and Statsionar-5 communication satellites. Earth stations have already been put into operation in the Soviet Union, Bulgaria, Hungary, GDR, Mongolia, Poland, Viet Nam, Czechoslovakia, and in Cuba and Algeria. The Intersputnik system interacts with the international Intelsat system.

The Soviet section also exhibited new developments -- the results of scientific and technical cooperation of radio specialists from many countries. The exhibits relating to the international maritime satellite system Inmarsat included the Standart-A shipboard station. This station provides round-the-clock duplex telephone and telegraph communications between subscribers aboard a vessel anywhere at sea and subscribers using the land network. The digital data rate is 1200 Baud (receiving) and 4800 Baud (transmitting). The station is automatic, and can be controlled remotely from a shore center with the help of a built-in microcomputer.

The fruitful cooperation of specialists from the USSR, the US, Canada and France within the framework of the corresponding agreement was reflected in the creation of an experimental satellite search and rescue system for vessels and aircraft in trouble. The Sarsat-ARB emergency radio buoy which was presented in the Soviet division is designed to determine the location of a platform in distress via a satellite-channel radio beacon (ARB-406) and a close-range radio beacon (ARB-121) which guides the search and rescue facilities to the platform.

The nominal operating frequency of the ARB-406 is 406.025 MHz, while that of the ARB-121 is 121.5 MHz. The devices can operate uninterruptedly for 28 and 48 hours, and consume power of 0.15 and 1.0 W, respectively.

The Unified Automated Communications System of the Soviet Union makes successful use radio relay equipment. Different stations are used on backbone and intra-zonal radio relay links. The radio relay systems used include the Elektronika-svyaz'-2 which operates in the 1.7-2.1 GHz range. This system can accommodate 720 telephone channels or color television programs with audio accompaniment. The digital Elektronika-svyaz'-500 radio relay station operates in the same range in inaccessible parts of the country. An autonomous power supply system can operate unattended continuously for at least 3 years. Each section is 200 km long with an average repeater interval of 25 km. The data rate is 2048 or 8448 kbps; the station weighs 10 kg.

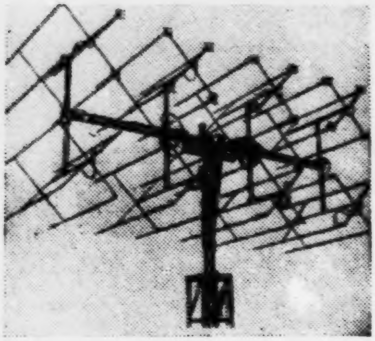
The Elektronika-svyaz'-11Ts digital radio relay system is used to arrange multi-hop PCM radio relay links. This system is made up of 15 intervals, each an average of 20 km long, and allows up to three insertions and removals of telephone channels. The data rate (20 PCM telephone channels) is 8448 kbps; the system operates in the 10.7-11.7 GHz range.

Microwave signals on mainline radio relay links are relayed in the 3.4-3.9 GHz band by the Elektronika-svyaz'-4 transceiving equipment. This system is being used to build new radio relay links, and to update existing links in order to improve the power potential and equipment reliability and reduce power consumption. This system can accommodate between 60 and 1920 telephone channels, or a single color television channel with four audio channels.

The Malyutka radio relay station is designed for arranging local stationary or temporary links up to 300 or 400 km long along construction routes and gas or oil pipelines, as well as for local communications links. This system provides the capability of connecting and switching three automatic telephone exchange trunks, five central blocking lines, two long-distance telephone lines, and two base radios; it can also be used for selective public-address communication and selective party calling. The frequency subbands occupied by the system are 150.5-151.7 and 155.5-166.7 MHz.

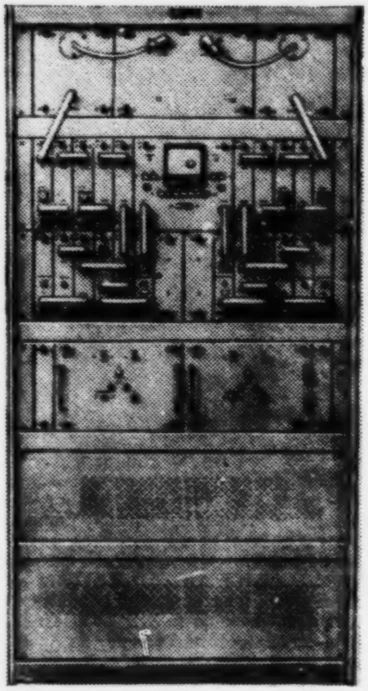
The Radan-II relay transceiver is used to organize a bundle of trunk lines between rural automatic exchanges. This is a PCM/FM system operating in the 10.7-11.7 MHz band.

In addition to satellite and radio relay communications, radio communications occupies an important position in the extensive arsenal of the USSR Unified System. The section on terrestrial radio communications exhibited various radios for industry and agriculture, for all types of transport, for construction, geological prospecting and weather forecasting. The characteristic features of the equipment exhibited include high sensitivity, frequency stability, increased degree of automation, the use of built-in test systems, and the extensive application of integrated circuits.



PP [expansion not given] antenna for receiving circularly polarized decimeter-band signals in Ekran-ChM television system (USSR)

The PPST 1-78 satellite television receiver is part of the Ekran-ChM system which relays television and radio programs via satellite (USSR)



The equipment exhibited at the show included the Purga-2 100 KW shortwave single-sideband transmitter. This transmitter is designed for mainline communications on Unified System links, long-range communications with foreign countries and long-range relay of broadcast programs. The Purga-2 operates in the 5-30 MHz band.

The continuous increase in the amount of mobile radio equipment (the number of such sets in the world approximately doubles every 4 or 5 years) requires continuous improvement of the systems into which it is organized, proper frequency allocation, and improvement of equipment parameters from the viewpoint of electromagnetic compatibility.

Radio equipment was exhibited extensively for widely varying branches of the national economy. This included the Viola system of ultrashort wave radios operating in the 148-149 and 172-173 MHz bands which are used for fixed-frequency simplex radio telephone and signaling with an operating radius of up to 20 or 30 kilometers.

The Aeroflot automated civil aviation communications system aroused considerable interest. This system supports the exchange of voice traffic and automatic exchange of data between aircraft crews and civil aviation ground services. The high-priority delivery time of messages in airport and route zones is 3 seconds, with lower priority delivery time of 10 and 30 seconds.

The Yadro-2 airborne shortwave radio is among the best of the modern aviation radio communications equipment. This radio is designed with hybrid and integrated microcircuits, and uses an analog-digital synthesis method for producing the frequency spectrum. The radio operates in the 2-30 MHz band; the standard output power is 400 W, with MTBF of 1200 hours.

Maritime communications facilities comprised a significant display. These included the Tsikloida and Sibir' receivers for vessels in the merchant, fishing and river fleets; as well as the Signal, which is used for audible and automatic reception of emergency signals and navigational warnings. The Yal, Bot and Poisk-R radios, as well as the Poisk-B emergency buoy, are being used in emergency rescue operations. The Nevka decimeter-band radio is being used within the river fleet system. The Leyer decimeter-band radio provides communications for workers during loading and unloading, tying up and in emergencies.

The Kolos fixed-frequency system provides duplex telephone communications without tuning over moderately rough rural terrain. This system operates in the 307-308 and 343-344 MHz bands. The Kolos multichannel system is now being used in 25 different dispatcher services.

The Soviet section of the show presented radios which are part of the Transport integrated railroad radio communications system. The radios in the Transport system support duplex and simplex radio communications, permanent and temporary radio communications, radio communications with random-access channels at large rail junctions, automatic access to the railroad automatic exchange, relay communications, communications in tunnels, etc.

The equipment in this system is based on standardized modules: transceivers, power supplies, portable and stationary control panels, and portable radio transceiver. The equipment is built with basic support constructions.

The Transport system consists of three subsystems: a train subsystem, station subsystem and repair-operational subsystem. The train subsystem supports communications between the dispatcher and locomotive engineers, between engineers aboard oncoming and following trains, and individuals involved with train operation. RS-1, RS-4, RS-6, PRM-S, RV-1, RV-2, RN-1, RN-2 radios, as well as SR-1, SR-2, SR-3 and SR-4 administrative radios are used for this.

The station subsystem supports communications between rail station dispatchers and individuals involved in technological processing of trains, and the engineers of switching and hump locomotives. The station subsystem includes RS-2, RS-3, RS-5, PRM-S, RV-4, RN-1, RN-2 and PRM-N radios.

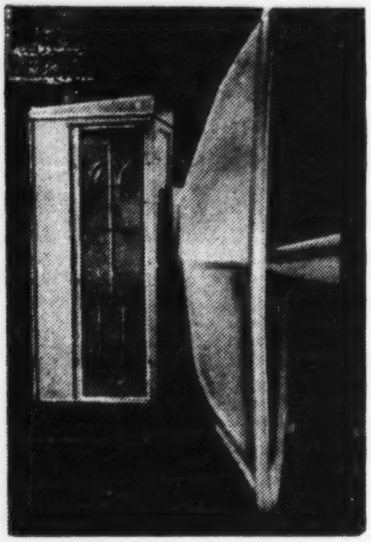
The repair-operational subsystem is used for communications between workers in repair subdivisions and road maintenance machines with repair service dispatchers. These communications are supported by RS-4, RS-6, TsRS, RV-6, RV-7, RV-8, RN-1, RN-4, and RN-5 radios, as well as SR-3 and SR-4 administrative radios.

The RV-2 and RV-3 radios which were displayed are standardized to the greatest extent in terms of circuit and design treatments and electrical parameters. Each radio includes a standardized transceiver, power supply and control panel. The standardized transceiver provides the basis for all portable and stationary radios in the Transport system for both the 160 and 330 MHz bands; a device for suppressing pulsed noise is provided. The power supply provides a 12 V ±5% output from a 110, 75 or 50 V ±20% locomotive or car line; the line pulsation factor may be up to 30%.

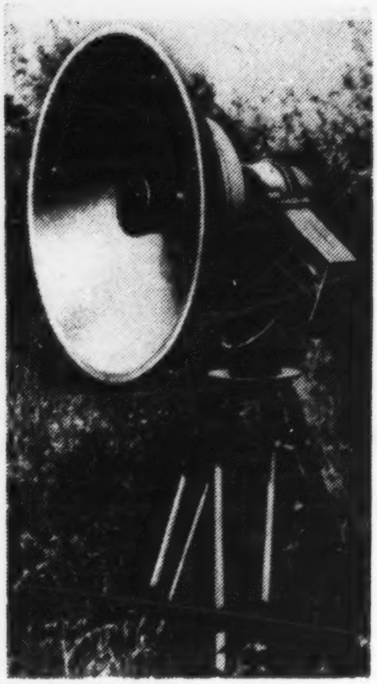
These radios use a single-crystal frequency synthesizer with frequency modulation, and a power amplifier based on a phase-locked loop voltage-controlled oscillator. The working frequencies of the radio are formed with the help of a frequency synthesizer. Frequency stability is achieved by a temperature-compensated crystal reference oscillator. The working channels are selected and switched with the help of a special-purpose microcontroller.

The RV-2 and RV-3 radios are fourth-generation devices which use microcircuits and increased-density hybrid microassemblies.

The RN-1 radio also uses microassemblies with caseless components, transistors and integrated microcircuits. This radio can operate continuously for over 8 hours with a standby reception - receive - transmit ratio of 8:1:1. A maximum of six channels is provided, and the system operates in the 151-156 MHz band.



Elektronika-svyaz'-11Ts digital radio relay system (USSR)



Radan-II few-channel transceiving relay (USSR)

Modern television and radio broadcast technology has been created in this country. The television transmitting network includes more than 450 high-power stations and 3,000 low-power relays. Radio programming is broadcast in 137 national languages of the USSR and foreign countries for a total of 1318 hours per day, including central radio broadcasting for 384 hours per day.

Color television technology is developing rapidly. During the last five-year plan, a third-generation system of standard color television transmitting equipment was developed and put into production. This equipment makes extensive use of integrated circuits. The equipment has stable technical parameters, good performance indicators, high reliability and operating convenience. The new equipment makes it possible to expand the creating and technical capabilities of television center personnel significantly.

For the first time, domestic television equipment is using local systems for automating the maintenance of signal parameters, raster combination, automatic monitoring, new methods for video signal processing and stabilization circuits. The equipment for centralized synchronization and injecting alpha-numeric characters into the picture is better than foreign analogs. The implementation of this technology considered the principle of extensive standardization of modules, devices and racks for different equipment systems.

A number of devices have also been created which make it possible to measure the "light-signal" characteristics of the circuit.

The APB-3TsT hardware programmable color television module is the basis of the stationary equipment. This device is used to form the complete television and audio signal when producing small-format studio television programs, film, slides and magnetic tape recordings. The APB-3TsT uses the SECAM system to produce the complete television signal.

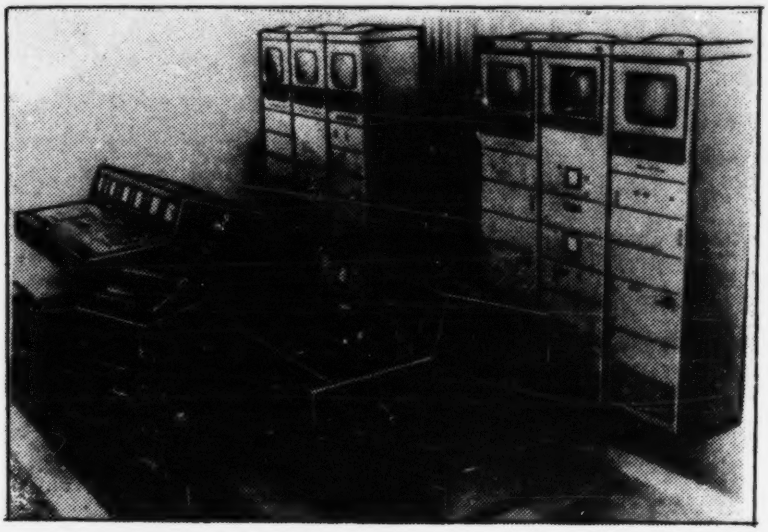
The Magnoliya-80 portable color television station (PTS-TsT) is the basic television equipment used for broadcast from outside the studio. This system includes four KT-132 color television cameras. The control, sync and test video signals are multiplexed and fed to the KT-132 camera via cables. The television printer device forms a television signal containing various textual messages. It is possible to color the characters input one letter at a time. The portable color television station provides the capability for fading, introducing special effects, captions, background projection, electronic pointers, electronic clocks and textual information. Captioning and electronic back projection can be controlled remotely from the producer's panel. The Magnoliya-80 portable color television station outputs a complete SECAM television signal, and two additional low frequency programs and two video tape recordings.

The DA-2TsT two-camera announcer's color television panel and the Izmereniye-S monitoring system were also presented at the show.

The TsTS-34 digital television system is used to convert the complete SECAM color television signal to a digital stream and reduce it to 34,368 mbps, and to restore the signal as well. This system is proposed for introduction at third-generation television centers to transmit television programs over the digital channels of the tertiary hierarchy of the Unified System.

The various television equipment displayed includes a miniaturized charge-coupled device television camera which is used to produce a black and white television picture. This camera is used as part of industrial television installations for observing production processes, and in video telephones.

The PTU-56 eight-camera television installation was also exhibited. It can be used to watch several black and white monitor images of different moving and stationary objects and production processes.



DA-2TsT two-camera color television announcer's equipment (USSR)

Transmitting television broadcast equipment exhibited at the show included the ATRS 50/5 KW automated television station for bands I, II and III.

Radio broadcast equipment was represented by medium-ware radios. One of these -- the Priboy-1 -- is used for long-range broadcast and has output power of 1000 KW; the other -- the Mirazh-ET -- is used for local low-power broadcast.

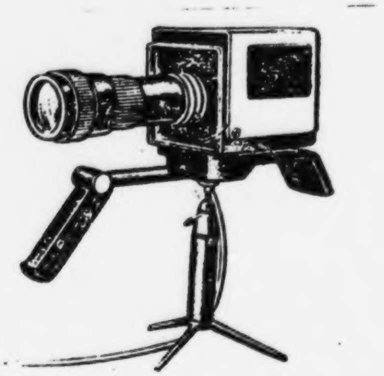
The Ishim-003 receiver is used at both attended and unattended remote-controlled radio relay points. This receiver has high selectivity and noise protection in all broadcast bands.

Extensive exhibits from socialist countries were displayed at the "Svyaz'-81" show.

The Hungarian exposition included various communications equipment, instrumentation, multiplexing equipment, radio communications equipment, radio relay stations, etc. Among the equipment shown included the RP-04/32 and RP-2/120 few-channel radio relay systems, the DRF-04/M and DRF-2/2M digital radio relay equipment, GTT-80 medium-channel radio relay system, and PA parabolic antenna for the 7 and 8 GHz range.

The RP-04/32 PCM radio relay equipment operates in the 400 MHz band, and can accommodate 30 telephone channels on a link up to 800 km long. This system includes terminal stations, intermediate stations and intermediate stations with channel extraction. The equipment is used for technological communications along railroads, oil pipelines, power transmission lines, etc.

The RP-2/120 120-channel PCM radio relay equipment operates in the 2 GHz band and provides 120 telephone channels with a capacity of 4x2048 mbps over a distance of up to 800 km. This system can also be used to organize technological communications along railroads, power lines, etc.



Television camera with charge-coupled devices for color pictures (USSR)

The DRF-04/M digital radio relay equipment is used to transmit digital signals at 2048 mbps over links up to 800 km long. The working frequency band is from 390 to 470 MHz. Terminal and intermediate stations, as well as intermediate stations with channel extraction and remote monitoring of the operating status of unattended stations are available.

The DRF-2/2M digital radio relay equipment provides the capability for transmitting digital signals at 2048 mbps over distances of up to 800 km. This system operates in the 1.7-1.9 or 1.9-2.1 GHz band. Up to 16 stations can be monitored remotely when unattended stations are used.

The GTT-80 microwave radio relay equipment is used for mainline radio relay communications in the 4 and 6 GHz bands. This equipment can accommodate six or eight duplex microwave trunks, respectively, using antennas 3 or 4 meters in diameter with a waveguide length of 80 and 100 meters. A single trunk can carry 960/1020, 1260/1320 or 1800/1920 telephone channels, or a single color television channel with from one to four audio accompaniment channels.

The ultrashort wave radio equipment displayed included the FM-05-165 phase-modulated transceiver and the FM-300 and FM-400 family of FM radiotelephone transceivers.

The displays of the German Democratic Republic exhibited radio relay equipment, communications technology, alarm signaling devices, etc. The U-700 system -- a new generation of ultrashort wave radio communications devices -- was presented. Devices in this system are used to configure portable, mobile and stationary installations. The U-700 system differs from its precursor in that it is smaller and lighter, consumes less energy and has better reliability. This is achieved by using the latest technology in the area of microelectronics and modern semiconductor technology in hybrid integrated circuits. The radios in the U-700 system can operate in the 4, 2 and 0.7-meter bands.

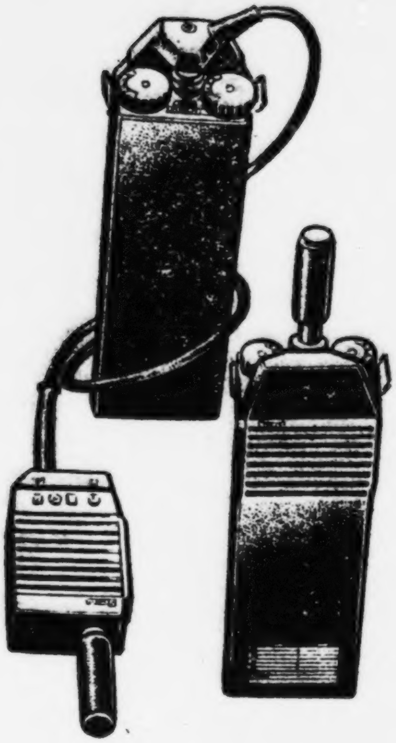
This system has been used as the basis for developing ultrashort wave train communications. This system includes stationary transceiving stations for line train communications with automatic transition to two- or four-wire lines to an adjacent station or to the devices serving the train dispatcher or stationmaster; mobile stations which are installed aboard mobile platforms and provide line radio communication; devices for stationmasters which are connected to the stationary stations via a two-wire line; a simple or automatic train dispatcher set; and a distributor with branching sections for four-wire communication of a stationary set.

The train communications system based on the U-700 allows the dispatcher to put out a common call to all locomotive engineers within a section, or to put out a coded call with the help of selective calling (train number). The engineer's aboard locomotives can also make a common call to stationmasters within their range. When a general call is made, once the engineer aboard the required locomotive has answered, the remaining mobile stations are blocked. Certain self-propelled rolling stock units can also call stationmasters. A coded message (train number) can be transmitted from the locomotive engineer to the dispatcher, as well as an emergency signal. The emergency signal is received by the dispatcher, stationmaster and engineers aboard locomotives located within the transmission zone.

DRF-04/M digital radio relay equipment (Hungary)

This system supports radio communications for the locomotive engineers through the stationary station, as well as directly between the engineers of two adjacent locomotives. There is a provision for an engineer to call the dispatcher, and for the dispatcher to place a priority call to the engineer in emergencies. The system provides access to the telephone network serving the railroad.

The technical devices exhibited by Bulgaria included the Len radio, which is part of a new series of radios designed for two-way communications in dispatcher systems used in different branches of the economy. This radio is based on modern semiconductor components, and uses logical light readout which provides information about five conditions, including information about malfunctions in the antenna feeder system. The transmitter has output power of 8-10 W, and the receiver sensitivity is at least 0.7 μV.



NR3045 portable UHF radios with separate (MUP=UA) and built-in (MUP=UF) speaker-microphones (SONAB Company, Finland)

A great deal of different technology was exhibited by Czechoslovakia, Poland and Yugoslavia. This includes transceiving equipment, television devices, radio relay systems, high frequency equipment, radios, communications systems, etc.

The collective booth from France displayed long-range communications facilities, electronic equipment for satellite communications, equipment for data transmission over radio relay links, and instrumentation.

Radiotelephone systems, portable radios, radio measurement equipment and diagnostic equipment were included among the exhibits presented by Finnish firms.

Companies from the Federal Republic of Germany demonstrated equipment for communication with mobile platforms, radio link equipment, instrumentation, electroacoustic equipment, studio and radio broadcast equipment, shipboard radio communication, cathode-ray tubes, radio tubes and semiconductor devices.

The exhibit from Great Britain included television equipment, radio search and radio calling equipment with noise suppression, communications technology, etc.

The booths from the United States exhibited mobile television installations, domestic radio equipment and testing/measuring equipment.

Japanese firms presented equipment for satellite communications, microwave transmitters, video projectors, television monitors, amplifiers and loudspeakers, as well as radio and television equipment for high quality recording.

The "Svyaz'-81" international show held under the banner "Communications Facilities in the Service of Society and Man" enriched the participants with new ideas, provided an impulse for the creative energy of engineers and scientists, and opened up new possibilities for human intelligence. This show will serve all of the peoples of the earth in the fight for peace and progress.

COPYRIGHT: IZDATEL'STVO "TRANSPORT", "AVTOMATIKA, TELEMEKHANIKA I SVYAZ'", 1982

6900
CSO: 5500/1016

COMPARISON OF PARAMETERS OF CABLE AND RADIO RELAY CIRCUITS

Moscow, VESTNIK SVYAZI in Russian No 12, Dec 81 pp 25-26

[Article by N.E. Popova, Candidate of Technical Sciences, Department Chief, Central Scientific-Research Institute of Communications, I.N. Kolobova, Deputy Laboratory Chief, and Ye.V. Koroleva, Engineer]

[Text] The YeASS [Unified Automatic Communications System] primary backbone network is now based on FDM transmission systems organized over cable and radio relay links; the complex network circuits include both cable and radio relay sections. Research was conducted separately on cable and radio relay circuits in order to compare their characteristics (data presented in table 1).

Comparisons were made of the following parameters: overall attenuation, noise power, pulsed noise at -15 dBO threshold analysis; transient interruptions at -18 dBO analysis threshold; frequency fluctuation of transmitted signals; and amplitude response.

The measurements were made using a prototype KAI-2 "Automated Research Complex" which allowed simultaneous measurement of 8 voice grade channel or network circuit parameters (the special calculator in this system processes each hour's measurements). The following production devices were used in parallel for backup: UNP-60, bay level meter, and MR-61. Voice grade channel measurements were made on an individual equipment bay at the 4 dBO point (receive) and -13 dBO (transmit) continuously over a period of 3 days for each circuit during April and November 1979. The parameters of the primary network circuits were measured at high impedance at the PPPG [expansion not given] "In" jack of the USPP [expansion not given] (-45 dBOn), and the PPrPG [expansion not given] "Out" jack (-12 dBOn) over a period of three months on the cable and radio relay circuits. Readings were taken during the day (from 0900 to 1600) every minute and every 15 minutes, and every 15 minutes at night (from 1600 to 0900).

The findings were processed over three-day and three-month intervals, with the following being computed: statistical parameters of overall attenuation; average hourly noise power; average hourly multichannel signal power; total amount of time noise exceeded -15 dBO threshold for an hour; total transient hourly interruption time at -18 dBO analysis threshold.

Table 1

Total length, km	Number of terminal points	Number of tandem mastergroups	Number of tandem supergroups	Number of tandem groups	Transmission system
2209 cable circuit	2	1	2	1	K-1920V K-1920
2029 radio relay circuit	2	2	3	-	VLT-1920 K-1920V (227 km) R-600 2M

Table 2

Channel	Statistical parameters of overall attenuation, dB		
	σ, dB	a_{max}	$a_{ac} - a_{nom}$
Cable	0.3	1.3	0.5
Radio relay	0.7	1.7	0.2
Standard	1.0	2.2	0.5

Table 3

Psophometric noise power during peak load hours, pWOp

Channel	Hourly average	Minute average for over 20% of measured time	Minute average for more than 0.1% of time
Cable	4000	4480	7840
Radio relay	16999	18930	28728
Standard cable	4000		
radio relay	8500		

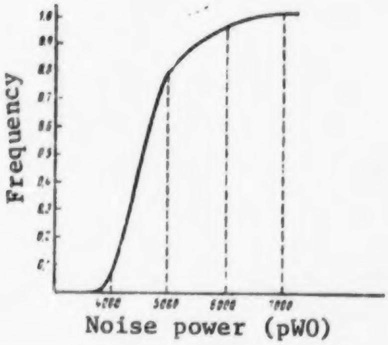


Figure 1. Integral distribution function of average minute-by-minute values of unweighted noise in voice-grade channel during peak load hours on cable circuit (March 1979).

Comparison of the findings indicated that the stability of the overall attenuation of a cable channel is twice that of a radio relay channel (table 2), and the average hourly psophometric noise power of the composite radio relay group circuit failed to satisfy the standards, and was four times the noise of the composite cable circuit (table 3).

Figures 1-4 show the integral and differential distribution functions of the average minute-by-minute noise values during peak load hours of a voice grade cable and radio relay channel.

Concurrently with measurement of the voice grade channel noise, the transmitted multichannel signal power in the group circuits of cable and radio relay links was monitored at the "In" jack of the USPP (-45 dB0n). As the measurements indicated, the average hourly power of a multichannel group signal does not exceed 1mW 98% of the time.

The percentage of hours during which there is pulsed noise exceeding the standard is between four and five times greater for the radio relay channel than for the cable channel; this percentage amounts to 9-33.8% of the measurement time. Noise exceeding the standard were observed for a maximum of 6.5% of the observation time in the cable channel. It should be noted that pulsed noise was observed both at night and during the day.

The number of hourly sessions with transient interruptions (less than 300 msec) exceeding the standard is 5.7 times greater in the radio relay channel than in the cable channel (the radio relay channel failed to meet standards during 49% of the hourly segments, while the cable channel failed to meet standards for 8.6% of the total number of measurement hours).

In the radio relay network circuit, the number of hourly sessions containing transient interruptions shorter than 300 msec amounted to as much as 9% of the measured time (3 months), which is three times more than for the cable circuit.

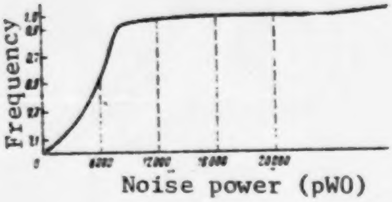


Figure 2. Integral distribution function of minute-by-minute unweighted noise in radio relay voice grade channel during peak load hours (March 1979)

An interruption lasting more than 300 msec is called a failure. Most radio relay circuit failures (9%) last between 300 msec and 2.5 minutes. The mean time between failures is 2 times longer for the cable circuit than for the radio relay circuit.

The amount of frequency variations in the voice grade channels carried over cable and radio relay circuits meet the standards, and does not exceed 1.35 Hz (the standard is 2.24 Hz).

The amplitude response of the voice grade channels meet existing standards.

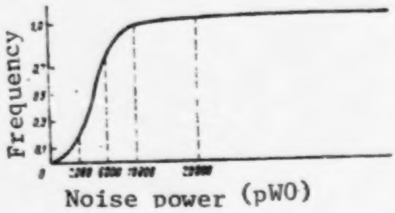


Figure 3. Integral distribution function of minute-by-minute unweighted noise values in cable circuit voice grade channel during peak load hours (November 1979)

Comparison of the parameters of composite network group circuits in the cable and radio relay systems indicated that all of the parameters of the cable composite group circuit satisfy existing standards with a considerable margin. All of the parameters of the radio relay composite group circuit satisfy the draft standards, except for the average hourly psophometric noise power. Such parameters as pulsed noise, transient interruptions and failures lasting more than 300 msec are significantly poorer for the radio relay composite group circuit than for the cable circuit.

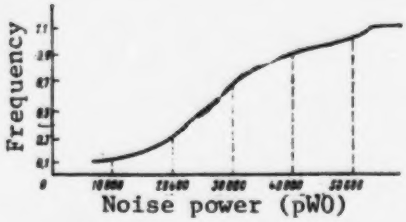


Figure 4. Integral distribution function of minute-by-minute average unweighted noise value in radio relay circuit voice grade channel during peak load hours (November 1979)

Comparison of the parameters of the radio relay and cable circuits revealed that the performance of the radio relay circuit is at about the level of a 1970 cable circuit. Work which has been done during the past 10 years on wire communications facilities has significantly improved their quality, which is confirmed by the measurement data from the cable circuits. This improvement has been achieved primarily by improving the performance of the guaranteed power supply equipment, improving automated gain control, introducing checks for bad contacts, replacing individual devices and parts, etc.

Improvement of the reliability and quality of radio relay communications requires that operational personnel work in conjunction with the Scientific-Research Institute of Radio, which will undoubtedly produce a beneficial effect.

COPYRIGHT: Izdatel'stvo "Radio i svyaz'", 1981

6900
CSO: 5500/1017

SWEDISH SPACE FIRM CHIEF DISCUSSES SATELLITE DEVELOPMENT

Stockholm SVENSKA DAGBLADET in Swedish 16 Feb 82 p 23

[Article by Sophie Petzell]

[Text] "Satellites are dirt cheap. You do not get rich building them, but you do get rich using them." This was said by ececutive vice-president Fredrik Engstrom of the state-owned Swedish Rymdbolaget aerospace company.

His enthusiasm for the Swedish space project is matched only by that of Industry Minister Nils Asling. The industry minister believes that the satellite programs are of great benefit not only for Swedish and Nordic industry. They also will contribute considerably to the decentralization of society.

"Ideology has won a victory over cultural conservatism," he said in reference to the probability that the Nordic Tele-X project with data and TV channels will become reality.

Ground Most Important

Both believe that while it is important for Swedish industry to participate in the development of satellites, the most important aspect for industry is ground facilities. They require large investments. The satellites' data service customers also will share large economic and organizational advantages.

Today there is not one Swedish or partly Swedish-owned satellite in space, but it will not be long before the first one is launched. In 10 years five Swedish or Nordic satellites may be in orbit.

The first will be the completely Swedish Viking, which is purely a research satellite. The Viking will be launched in 1984 with the European Ariane 2 rocket to an extremely high orbit--up to 15,000 km. The primarily French Spot satellite will be launched with the same rocket. Almost 5 percent of this satellite is owned by Sweden, however. Spot will take pictures of the earth's surface from an altitude of 820 km.

Viking is a relatively cheap satellite--it costs "only" about 100 million kronor. Saab-Scania and other Swedish companies produced the equipment for the satellite, while the American Boeing Corp. produced the platform on which this equipment will be mounted.

Nordsat Buried

In 1986 Ariane 3 will be launched into space and Tele-X is already booked for the flight. Plans for the old Nordsat have been quietly buried, while the Industry Ministry, the National Telecommunications Service, the State Aerospace Commission, and Rymdbolaget, along with the aerospace industry, produced plans for Tele-X.

The satellite will cost a total of about 650 million kronor and will be constructed by Swedish, Finnish, and Norwegian industry on a platform produced by the French Aerospatiale Company, among others. Nordic industry is responsible for one third of the 650 million.

In exchange for the agreement with Aerospatiale, Sweden was given favorable terms. Saab-Scania and LM Ericsson have received equipment orders for 6 to 8 percent of the value of the satellites now planned by a German-French group which includes Aerospatiale, MBB, and AEG-Telefunken of Germany, as well as Thomson CSF of France. The group believes that about 200 civilian communications satellites will be launched outside the United States before the end of the century. The group intends to corner half this market and Saab-Scania and LM Ericsson have a good chance of being included.

A week or so ago it became clear that Finnish and Norwegian industry would participate in the Tele-X project. Denmark declined long ago. Industry Minister Nils Asling will present a proposal to parliament on Tele-X in the near future.

What can he offer the Swedish people in exchange for investments?

Tele-X can broadcast TV programs in the eastern Nordic countries and transmit information and data.

It will be located at an altitude of 36,000 km and remain over the same spot on earth for many years. Thus, it will follow the rotation of the earth and be what is called geostationary.

Tele-X can receive signals from earth and retransmit them. The satellite will have four types of communications equipment:

High-speed data that can transmit text and facsimile, but also data from and to computers. This equipment also can transmit wireless telephone conversations.

Two TV channels may be transmitted simultaneously direct to the home of the receiver.

Equipment to determine experimentally how high the frequencies may be that are used by telecommunications satellites over the Nordic countries. Results of these measurements later will determine the design of Nordic telecommunications satellites for the future.

A system that can transmit signals from trucks and trains, for example, to communications centers in the Nordic countries. It is uncertain, however, whether this modern version of the mobile radio actually will be placed in Tele-X.

Satellites

A satellite has a lifetime of 5 to 7 years. Geostationary satellites are not completely stationary. They gradually glide in the direction of the Indian Ocean, since the force of gravity is stronger there. Thus, the satellites must be replaced. The Industry Ministry and other organizations involved foresee an increased need for new satellites as we learn to utilize the services they offer.

A replacement for Tele-X is being planned already. Current plans are for three satellites that could be launched in 1988, 1990, and 1991. The three could have functions similar to Tele-X, but the emphasis may be shifted from data transmission to TV transmission, according to need.

Both Nils Asling and Fredrik Engstrom are convinced that the need exists and is increasing.

Simpler Ground Equipment

There will be many fields of application, according to Fredrik Engstrom.

"We are in a rapidly expanding field. At present, we are not even aware of all the possible applications of satellites."

Since satellites are becoming more and more technically advanced, relatively simple technical equipment may be used on the ground. Companies that produce earth stations are counting on a large market.

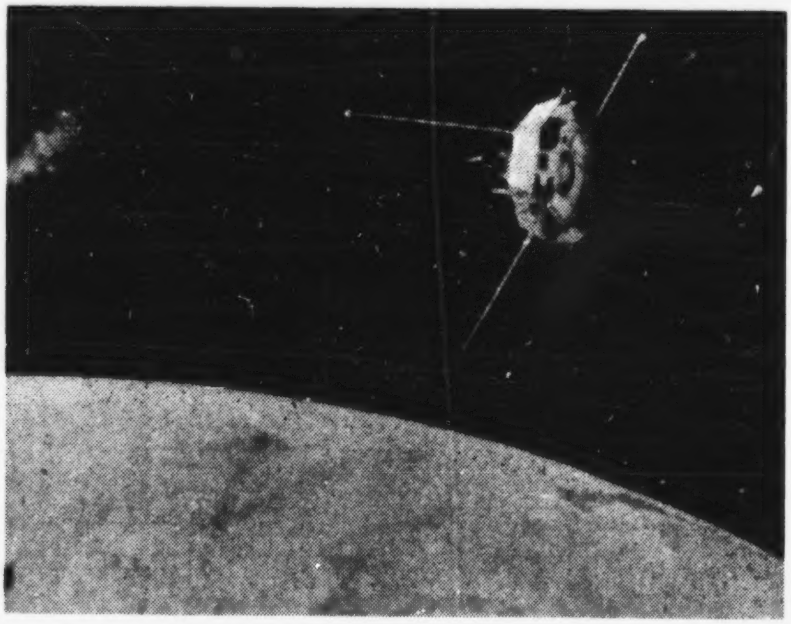
LM Ericsson and the Norwegian company Elektrisk Bureau (EB) recently signed an agreement for cooperation on a 50 - 50 basis in this area. The companies believe that the Nordic ground station market alone will be worth at least 1.5 billion kronor through the end of this century.

At that time, there will be between 5,000 and 10,000 stations here in two sizes. Simple stations will be used for companies. They will be equipped to handle telefax, video conferences, but primarily text and data transmission. This type of station costs about 200,000 kronor. The larger stations costing 2.5 million kronor also may be used for transmitting maps, graphic material for remote printing of newspapers and analysis of pictures. LM and EB hope that eventually they will be able to compete internationally with ground stations.

Political Decision

EB probably will be responsible for the large station monitoring all trafic to and from Tele-X. This station will handle customer accounts, among other things, and will be built outside Stockholm.

The role of future satellites in transmitting TV programs is still unclear. The politicians first must reach an agreement, but however they are used, the market for parabolic antennas at Swedish homes will grow, now that German and French broadcasts are reaching Sweden.



Artist's rendering of the first completely Swedish satellite, the Viking, in orbit around the earth.

9336
CSO: 5500/2125

LM ERICSSON PREPARING NEW TELECOMMUNICATIONS PRODUCTS

Stockholm SVENSKA DAGBLADET in Swedish 16 Feb 82 p 25

[Article by Johan Myrsten]

[Text] While the money is rolling in from the many AXE stations that have been sold throughout the world, LM Ericsson is making large investments in several areas. These include not only information technology for the office, but also turnkey network construction projects, electronic components, and systems expertise.

The parent company in the Ericsson group, which dropped the famous initials LM at the beginning of the year, presently is showing a "clear profit," according to information director Nils Tengberg. Several subsidiaries, including those in France and Spain, are experiencing problems, however.

How high profits are will not be revealed until the end of March. The report for the first 9 months of 1981 showed a profit of 601 million kronor before balancing provisions, which was 5.6 percent of invoices totaling 10.672 billion. This is only a 0.2 percent larger margin than for the same period in 1980--and 2.1 percent lower than the margin for all of 1980.

Nevertheless, the AXE stations apparently are providing high profits at present. According to Nils Tengberg, production of the fast-selling telephone stations has progressed so far that their manufacturing process has been highly rationalized.

The AXE revenues will not only provide returns on previous investments in the AXE system. They also will contribute to the high investments that characterize the Ericsson group today.

Office Enticing

The largest and presently most publicized investments involve the company's entry into the office automation and communications equipment market, with the help of the former Datasaab in the newly formed subsidiary Ericsson

Information Systems (EIS). The entry into this new market will be a demanding test for Ericsson, which must learn to sell to private customers instead of a few large telecommunications services. The enticement is the large market, estimated at about 200 billion kronor in 1985, and its rapid growth, estimated at 15 percent annually. (A detailed description of EIS was published in SVENSKA DAGBLADET on 12 January.)

Turnkey Contracts

The newest and so far least publicized effort is a further development of Ericsson's traditional activity, namely the delivery of turnkey network construction projects in the areas of telecommunications and railway signaling. This is a type of contract work based partly on Ericsson's expertise in systems construction in these areas and partly on the experience the group has gained from the large-scale project in Saudi Arabia. The Saudi order included everything from telephone stations to network facilities. At one time 6,000 Koreans from the Dong Ah construction company were excavating and installing lines for Ericsson and Philips in Saudi Arabia.

"This area deserves more attention. The need for overall contractors for local networks is increasing rapidly, especially since this is becoming a larger and larger part of total costs within public telecommunications networks. But Ericsson also intends to go beyond its traditional circle of customers. New customer categories include oil and pipeline companies which are in great need of private telecommunications networks at their installations, as well as defense authorities and railroad companies," said Bjorn Linton, head of this new area of business.

Projects of this type should be able to double their sales within a 5-year period, to about 2 billion kronor.

In addition to the order in Saudi Arabia, Ericsson also has large turnkey contracts with Libya, Iraq, and Australia. The Iraqi contract was signed in November and is valued at 1 billion kronor, although this figure could increase in the future.

Industrial Electronics

A third important but little publicized effort is the development and production of electronic circuits and other components in the subsidiary RIFA. The purpose is not only to provide Ericsson with equipment and components, but also to enter the industrial electronics market, described as "an extremely important, slumbering market of the future." The goal is to make RIFA "one of the leading component companies in Europe."

Ericsson's fourth area of interest is the accumulation of broad systems expertise. Such expertise, which is at a premium in the computer world, will include several program warehouses, such as Ericsson Programmatics.

With all deference to these new fields of endeavor, however, the most important activity for many years to come will involve telephone stations. The Ericsson management still is extremely optimistic about the future of the AXE and is counting on winning a larger share of the market from competitors. Increased sales are estimated at 8 to 10 percent annually in terms of volume, which is somewhat greater than the increase in the world market.

Technological Lead

The total value of all AXE stations ordered and installed to date is estimated by the sales manager for public telephone stations, Knut Albertsson, at about 9 billion kronor. At the beginning of this year there were 150 AXE stations (including 15 in Sweden), corresponding to 1.25 million lines, operating in 22 countries. An additional 300 stations (including 15 in Sweden), corresponding to 3.25 million lines, have been ordered and 11 new countries are among those ordering stations. The order to Saudi Arabia is for 600,000 lines from Ericsson, or 15 percent of all AXE stations that have been ordered.

"Our estimation of the competition is that we hold a technological lead over our most serious competitors, Siemens and ITT. They do not yet have a telephone station of the latest generation in operation," Knut Albertsson said.

"This means a 2 to 3 year lead. We will maintain our lead for several years more, since we now are preparing to offer additional services."

These include three new applications of AXE:

Large international interurban stations with the possibility of trafic via satellites. The first will be in operation in Sweden in 1983.

Smaller stations for rural areas with perhaps 1,000 lines.

Mobile telephony, with the new Nordic network as a first example.

Force Price Down

Among the most serious competitors, Knut Albertsson also includes CIT-Alcatel of France and Hitachi, Fujitsu, and Nippon Electric of Japan, all of which offer low prices and favorable loans.

"In individual deals prices are forced down. This occurs when the companies are attempting to establish a market by receiving an order."

Ericsson is bidding on telephone stations in the United States, Great Britain, Greece, Hungary, South Korea, Indonesia, and elsewhere.

The following is a summary of Ericsson's other activities:

Cable is somewhat of a problem area with reduced demand for telecommunications cable as a result of new technology.

Military electronics (radar, semiconductor technology, radio relay and satellite systems, missile electronics, and communications) is seen as "an interesting field from a market standpoint."

Mobile telephone systems and personal paging systems are seen as strong products, while traditional mobile radio systems are experiencing much more sluggish growth.

Signaling and control systems for railroads are in demand.

Computerized timing devices also are in increasing demand.

9336
CSO: 5500/2125

SWEDEN

BRIEFS

FIRST ERICSSON TELETEX ORDER--Ericsson Information Systems AB has received an order from the National Telecommunications Service for teletex equipment valued at about 40 million kronor. Among other things, the order includes a large number of Eritex 10's, one of Ericsson's new products for office automation with teletex communications. Deliveries will begin during the fall of 1982. This is the first large order of the new Eritex family of products from Ericsson Information Systems. For this reason, the order from the Telecommunications service is seen as an important reference for future marketing of the company's products abroad. [Text] [Stockholm SVENSKA DAGBLADET in Swedish 16 Feb 82 p 25] 9336

CSO: 5500/2125

END

JPRS 80489

5 April 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 210

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 80489

5 April 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 210

CONTENTS

WORLDWIDE AFFAIRS

Briefs
DPRK, CSSR Sign Radio Protocol 1

ASIA

AFGHANISTAN

Achievements in Space Communications Hailed
(Editorial; KABUL NEW TIMES, 3 Mar 82) 2

EAST EUROPE

CZECHOSLOVAKIA

Briefs
Telephone to Syria Automated 4

LATIN AMERICA

BARBADOS

Briefs
New Radio Station 5

NEAR EAST AND NORTH AFRICA

IRAN

Automatic Telephone Network Inaugurated in Mahallat
(KEYHAN, 14 Feb 82) 6

SUB-SAHARAN AFRICA

INTER-AFRICAN AFFAIRS

'PANA' Director Interviewed
(Rowland Nwachukwu; NAN, 22 Mar 82) 9

GHANA

ADB Loan to PTT for Extending Telephone Links
(Wendy Asiama; DAILY GRAPHIC, 26 Feb 82) 11

Briefs
Broadcasting Hours Extended 12

SEYCHELLES

Outer Island Communications Could Be More Secure Under New Bill
(NATION, 10 Mar 82) 13

SWAZILAND

Merger of SBS-STBC Advocated
(Editorial; THE SWAZI OBSERVER, 6 Mar 82) 14

ZAMBIA

Briefs
Swedish, Chinese Transmitter Spares 15

WEST EUROPE

FRANCE

CNET Studying Project To Intergate Phone, Telex, Transpac
(REVUE FRANCAISE DES TELECOMMUNICATIONS, Oct 81) 16

New Telecommunications Director Speaks on Plans, Exports
(Jacques Dondoux Interview; ZERO UN INFORMATIQUE, Dec 81).. 22

GREECE

Electronic 'Umbrella' Protection Against Pirate Stations
(TO VIMA, 25 Feb 82) 28

BRIEFS

DPRK, CSSR SIGN RADIO PROTOCOL--Pyongyang, 22 Mar (KCNA)--A protocol on cooperation in radio broadcasting between the DPRK Radio and Television Broadcasting Committee and the Czechoslovak Radio for 1982-1984 was signed in Pyongyang in 21 March. Present at the signing ceremony on our side were Chairman Yi Yong-ik and Vice-Chairman Yi Pong-hui of the DPRK Radio and Television Broadcasting Committee and other personages concerned and on the opposite side were the members of the delegation of Czechoslovak Radio headed by its Deputy Director General Karel Hrabal and Ambassador Josep Hadravek and an official of the Czechoslovak Embassy in Pyongyang. The protocol was signed by Vice-Chairman Yi Pong-hui and Deputy Director General Karel Hrabal. [Text] [SK220433 Pyongyang KCNA in English 0403 GMT 22 Mar 82]

CSO: 5500/2168

ACHIEVEMENTS IN SPACE COMMUNICATIONS HAILED

Kabul KABUL NEW TIMES in English 3 Mar 82 p 2

[Editorial: "Development of Communication Facilities"]

[Text] As a land locked developing country, expansion and development of communication networks and transportation are among the priorities of the Democratic Republic of Afghanistan for strengthening ties among the people, popularization of scientific thoughts and dissemination of fresh information on science and technology in preparing the broad masses of the people to embrace the contemporary rapid socio-economic transformations in the world.

In an effort to introduce positive fundamental changes, the Government of the Democratic Republic of Afghanistan concurrent with positive fundamental transformations in other sectors pays ample attention to the development of the communications in the country.

The inauguration of the satellites land station 'Shamshad' as a gift of the friendly Soviet Union on the occasion of the 61st anniversary of the friendship and cooperation treaty between Afghanistan and the USSR, in fact opens a new era in the communications activities of the country, by which we receive and transmit television programmes by the satellites.

The Shamshad satellites land station not only provides facilities for radio and television programmes in national as well as international level with better quality but also serves as a broad communication network. With the activation of the station, the system of our telephone and telegraphic communications, our television and radio broadcasts will operate better through the satellite system. The station provides facilities in telephone communication from twelve to eighty communication channels with the foreign countries. It also provides desirable possibilities for expansion of telex and telegraphic communications with other countries.

Afghanistan after the Saur Revolution, especially its new phase, has changed to an arena of revolutionary work and struggle. We are determined to build a flourishing and blossoming society where all live in full security and prosperity. To realize the lofty aspiration all the potentials in the country should be utilized properly and also utmost use should be made of the experiences and cooperation of our international friends. The expansion of communications network along with other great strides paves the way for realization of such humane aspirations and further familiarise our people with the contemporary science and knowledge, culture and arts and developments of the progressive societies.

The Shamshad satellites land station is a gift of the friendly Soviet Union which has been built with a cost of seven million roubles gratis aid of the Ministry of Communications of the Union of Soviet Socialist Republics and afs six million from the government development budget has been spent for the construction purposes in the project.

The Shamshad satellites land station, another example of the fruitful cooperation between the Democratic Republic of Afghanistan and the great land of the Soviets, will provide Afghanistan with modern communication facilities by the satellite, the fruitful results of which will be evident in the socio-economic changes of the Afghan society in the future.

CSO: 5500/5337

CZECHOSLOVAKIA

BRIEFS

TELEPHONE TO SYRIA AUTOMATED--First automatic telephone contact between the CSSR and the Near East, as well as first from the CSSR to a place outside of Europe, was inaugurated on 23 March. The system makes possible telephone contact between the CSSR and 19 telephone circuits in the Syrian Arab Republic. This telephone line, which can be simultaneously used by 11 participants, traverses Hungary, Yugoslavia and Greece, from where it leads via a submarine cable to Damascus, Syria. [Prague MLADA FRONTA in Czech 24 Mar 82 p 7]

CSO: 5500/3009

BRIEFS

NEW RADIO STATION--Bridgetown, Barbados, 22 Mar (CANA)--A new local commercial radio station, Barbados Broadcasting Service (BBS), is expected to go on the air by September, according to press reports today. The NATION newspaper today quoted sources close to the private company as saying that the directors of the radio station had scheduled regular broadcasts to begin sometime before September. Plans had been made originally to have the station open for the independence celebrations here on 30 November last year, but were shelved to allow permanent studios to be completed. The NATION said that the station is being constructed at a cost of $2 million (1 Bdos dollar; 50 U.S. cents). An agreement for a licence to operate an AM-FM service was signed last June by minister of information, Nigel Barrow, and the directors of the company. The station is to have three studios, library and programming offices, a news room, reception area and a lunch room with a patio as well as the administrative offices. The report said it has been constructed to withstand hurricane force winds of more than 160 miles an hour. The BBS plans to employ about 22 people in the initial stages. It will be located in St Michaels Parish, about 3 miles southeast of Bridgetown. [Text] [FL221930 Bridgetown CANA in English 1907 GMT 22 Mar 82]

CSO: 3025/1061

AUTOMATIC TELEPHONE NETWORK INAUGURATED IN MAHALLAT

Tehran KEYHAN in Persian 14 Feb 82 pp 1, 6

[Text] Mahallat--A 2,500-number automatic telephone center for the Mahallat city-region was inaugurated and put into operation in the presence of the Communications Company managing director, the Majles representative from Mahallat, the Mahallat Friday prayer leader, and a group of local officials.

The inauguration ceremonies for the Mahallat telephone center were begun with a reading from the Koran. Then the Mahallat communications official expressed his gratitude to the Mahallat Reconstruction Crusade for their activities in completing the communications building, and proposed that the center be named for martyr Qandi in recognition of his services. After that the Communications Company managing director spoke, praising the efforts of martyr Qandi, and stated: At the present time we do not have any foreign experts in this company, and all technical and expert activities are done under the supervision of Iranian brothers.

At ceremony's end, the Mahallat telephone center was put into operation by the city's Friday prayer leader, and those present inspected various parts of the center. Afterwards they proceeded to the perpetual place of rendezvous of those who love God, in order to participate in Friday prayers.

Rasht--Automatic telephone center No 4 for the Rasht city-region, with a 5,000-number capacity, was inaugurated and began operations simultaneously with the holding of revolution ceremonies in Gilan Province. Those present included Hojjatoleslam Ehsanbakhsh, representative of the imam in Gilan Province, Shadnush, chief of the Gilan Governor General's office, the Gilan municipal police chief, the gendarmarie commander for the Gilan district, and a group of other officials. In these ceremonies, the Gilan Province communications managing director spoke about the Ten Days of Dawn and the precious achievements of the Iranian Islamic revolution, and also about the technical specifications and operation of this communications center. Then the imam's representative in Gilan Province inaugurated Rasht's No 4 automatic telephone center in the name of God. Afterwards various parts of the center were inspected by the imam's representative and chief of the Gilan Governor General's Office and their companions.

According to the report of the CENTRAL NEWS UNIT correspondent, the sum of 250 million rials was expended in preparing technical operations and installing

Rasht's automatic telephone center No 4. All of this was accomplished through the efforts of Iranian engineers, technicians and workers.

A 1,000-number telephone center in Firuz Kuh was officially inaugurated and put into operation in the presence of Tehran's Governor General, the Majles representative from Firuz Kuh and Mamuniyeh, and the Communications Company managing director. The distribution of telephone lines in Firuz Kuh has begun, and inter-city telephone service also will soon go into operation.

Orumiyeh--On the occasion of the Iranian Islamic revolution's third anniversary, a new Naqadeh Post Office building, and a Post and Communications Office for the Orumiyeh Sugar Factory Village were inaugurated.

The new Naqadeh Post Office building, with 650 square meters of floor space, was built through the expenditure of 20 million rials allocated from special district plans credit. The Orumiyeh Sugar Factory Village Post and Communications office, with 180 square meters of floor space, was built with a 5 million rial expenditure.

During opening ceremonies for the Orumiyeh Sugar Factory Village Post and Communications Office, in which provincial authorities and village people participated, a speech was made about the goals of the Iranian Islamic revolution. Following that, opening ceremony participants viewed a stamp exhibition set up in Sugar Factory Village to commemorate the Ten Days of Dawn.

On the basis of a report, a 1,000-number automatic telephone center for the city was inaugurated and put into operation simultaneously with the glorious ceremonies on the anniversary of the revolution's victory held in the Naqadeh city-region. Construction of an automatic telephone center was a long-held hope of the city-region's people which was realized through the efforts of the Communications Company's technical employees after the victory of the Islamic revolution. At the same time Naqadeh was tied into the national network with a code of 0444.

Bakhtaran--In anticipation of the fourth anniversary of the glorious Islamic revolution's victory, a post office has been set up on the Sumar and Sar-e Pol-e Zahab fronts.

According to the report received, a post office in the Abadar Base and a forwarding post office in Sar-e Pol-e Zahab have been set up in order to speed postal communications between the fighting brothers and their families.

Furthermore, six mailboxes have been set up on the front lines of the Sar-e Pol-e Zahab and Gilan-e Gharb fronts.

The same report indicates that a rural post office for Dowlat Abad and Ravansar was opened to commemorate the Ten Days of Dawn.

Tuysarkan--In a ceremony on the anniversary of the history-making bright dawn of 22 Bahman, a 1,500-number automatic telephone center for the Tuysarkan city-region was inaugurated and put into operation. Similarly, 100-number telephone centers were inaugurated in the villages of Shahanjerin and Qaraveh which are situated in the Zaran district.

Khorramabad--The Khorramabad and Borujerd city-regions were connected to the international telephone network on the occasion of the Ten Days of Dawn and the third anniversary of the Islamic revolution's victory. During the ceremony, operation of the second international telephone began in the Khorramabad and Borujerd city-regions. Through the plan's operation, inhabitants of the two city-regions can make direct telephone contact with other countries. As operation of the international communications plan for the two city-regions began, the managing director of Lorestan Province's communications was interviewed by the Khorramabad CENTRAL NEWS UNIT and stated: Other than the plan which went into operation today, more than 80 percent of the construction operations for automatic telephones in the 'Aligudarz city-region and surrounding districts in Lorestan Province have been accomplished through the efforts of committed Iranian experts. We will soon witness the operation of this communications plan.

Shahr-e Kord--On the threshold of the anniversary of the Islamic revolution's victory, a 500-number semi-automatic telephone center began operation in Farrokh Shahr, in the presence of Hojjatoleslam 'Isa Tavassoli, Farrokh Shahr's Friday prayer leader, the administrative political deputy from the Chahar Mahall and Bakhtiari Governor General's Office, a group of martyrs' families, and people from Farrokh Shahr. The ceremony began with a reading from the Koran. The managing director of Chahar Mahall and Bakhtiari Province communications spoke about how the center was established. Then Hojjatoleslam Tavassoli gave a short speech about the positive accomplishments of the Islamic revolution, and said: One of the blessings of the blood of martyrs is that the shining faces of the Hezbollah [Party of God] appear in their full beauty. Anything done anywhere in the world to benefit the oppressed is a thorn in the eye of Islam's enemies. Then the administrative political deputy from the Governor General's Office, emphasizing the slogan of "independence, freedom and the Islamic Republic," said: All of us must mobilize in order to achieve self-sufficiency and independence. It is through greater effort that we will be able to respond affirmatively to the aims of the Islamic revolution and the imam's commands.

9597
CSO: 5500/5328

'PANA' DIRECTOR INTERVIEWED

AB221553 Lagos NAN in English 1520 GMT 22 Mar 82

[By Rowland Nwachukwu]

[Text] Dakar, 22 Mar (NAN)--The director of the PAN-AFRICAN NEWS AGENCY (PANA), Mr Cheika Ousmane Diallo, has said that the take-off of the organization was being hampered by a shortage of qualified manpower.

Speaking in an interview with the NEWS AGENCY OF NIGERIA (NAN) on Friday in Dakar, Senegal, Mr Diallo said that the manpower problem was the most important because we want the most qualified and competent Africans to come and work for PANA.

Mr Diallo said that it was difficult to find highly qualified people who can be released by their countries or who can accept the remuneration offered by the organization.

Besides that, he went on, we have to find people who have Pan-Africanist ideas, because working for PANA was different from working for ones own country.

Asked what criteria the agency would adopt in recruiting staff, the PANA director said that the first was efficiency, followed by geographical distribution and linguistic considerations.

He added: But the most important criterion is efficiency because at the end, what people will use is the material of PANA. They will not ask for the nationality of the man sending the story.

What is important to us is the result, and to give out a product which is of high quality, and which can really compete with the big foreign news agencies.

On the technical problems of PANA, Mr Diallo said that it had within the past three years set up part of the telecommunications network.

He added, however, that between now and the end of the year, the agency would hold meetings at regional pool levels to co-ordinate its telecommunications projects.

The projects involve linking member-countries of PANA with the headquarters of the regional pools and linking the pools with the PANA headquarters in Dakar.

Mr Diallo explained that there were three possibilities for linking the regional pool headquarters with the agency's headquarters; either through the satellite or the submarine cable or through the high frequency radio microwave.

He said that the West African regional pool, with its headquarters in Lagos, would link with Dakar by submarine cable.

The PANA director said that another technical problem was that of equipment. He said that the organization would soon decide on the type of equipment it needed at the Dakar headquarters and at the headquarters of the regional pools.

Besides that, we have got to see the countries which don't have communications facilities, so that we can provide them with the minimum equipment necessary for them to participate in the activities of PANA, he added.

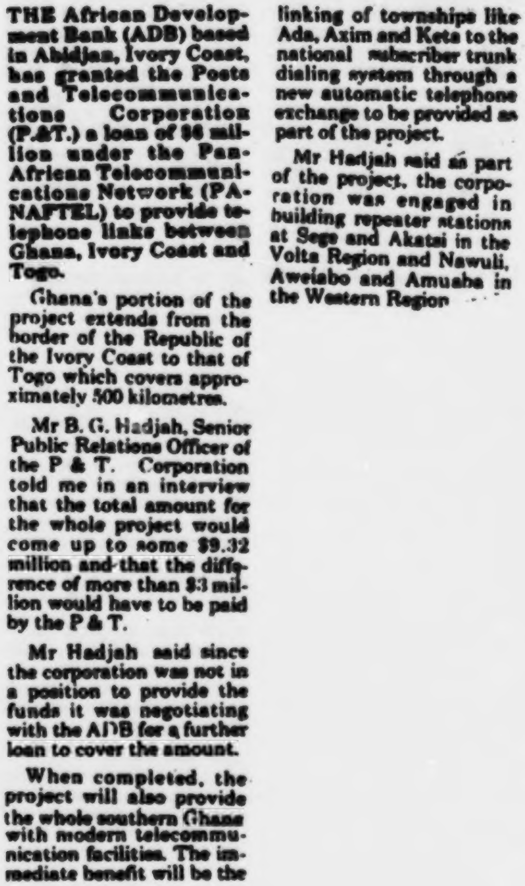
On whether it was necessary to link all the regional pool headquarters or all the member-countries before the take-off stage, Mr Diallo said that PANA would start with the equipment of those who could participate, adding: After that, when the others are ready, they can also follow.

CSO: 5500/5782

ADB LOAN TO PTT FOR EXTENDING TELEPHONE LINKS

Accra DAILY GRAPHIC in English 26 Feb 82 p 8

[Article by Wendy Asiama]



[Text] **THE African Development Bank (ADB) based in Abidjan, Ivory Coast, has granted the Posts and Telecommunications Corporation (P.&T.) a loan of $6 million under the Pan-African Telecommunications Network (PANAFTEL) to provide telephone links between Ghana, Ivory Coast and Togo.**

Ghana's portion of the project extends from the border of the Republic of the Ivory Coast to that of Togo which covers approximately 500 kilometres.

Mr B. G. Hadjah, Senior Public Relations Officer of the P & T. Corporation told me in an interview that the total amount for the whole project would come up to some $9.32 million and that the difference of more than $3 million would have to be paid by the P & T.

Mr Hadjah said since the corporation was not in a position to provide the funds it was negotiating with the ADB for a further loan to cover the amount.

When completed, the project will also provide the whole southern Ghana with modern telecommunication facilities. The immediate benefit will be the linking of townships like Ada, Axim and Keta to the national subscriber trunk dialing system through a new automatic telephone exchange to be provided as part of the project.

Mr Hadjah said as part of the project, the corporation was engaged in building repeater stations at Sege and Akatsi in the Volta Region and Nawuli, Aweiabo and Amuaba in the Western Region

CSO: 5500/5728

BRIEFS

BROADCASTING HOURS EXTENDED--Ghana Broadcasting Corporation has decided to extend its transmission hours on GBC--1 and 2 from 5 a. m. to 9.05 a. m. instead of the existing 5.30 a. m.--8.05 a. m. with effect from Sunday, to project the aims and objectives of the revolution. A release issued by the GBC in Accra yesterday said to this end, new programme ideas had been injected into the content of broadcasts on the two stations. [Text] [Accra GHANAIAN TIMES in English 26 Feb 82 p 8]

CSO: 5500/5728

OUTER ISLAND COMMUNICATIONS COULD BE MORE SECURE UNDER NEW BILL

Victoria NATION in English 10 Mar 82 pp 1, 2

[Text] STAND-BY radios should be set up on outer islands in case main sets break down, a new bill of law published this week proposes.

Under a 1978 decree, radio sets for communication with Mahé have to be set up on inhabited islands.

If the Radio Communications (Islands) (Amendment) Bill which came out on Monday is accepted by the People's Assembly at its next sitting, 18 islands and island groups will have to also set up standby radio receiver/transmitters to back up the sets they already have.

The islands concerned are both privately and state owned and include all possessions of the Islands Development Company.

The island groups concerned are Aldabra, Cosmoledo, Poivre, Farquhar and Providence Atolls.

In the Amirantes group d'Arros, Desroches and Marie Louise are included.

Other islands are Alphonse, Astove, Assomption, Coëtivy, Frégate, Ile aux Vaches, Ile Denis, Ile Plate and, off Mahé, Silhouette and Ile du Nord.

Any owner who does not install two radio sets and who even fails to maintain or operate them could be fined by a court up to R10,000 and/or be jailed for up to a year.

The setting up of a reliable radio communications network between Mahé and the other islands is seen by the Government to be indispensable to the proper development of the islands and to the security of the country and of the exclusive economic zone.

With airstrips on most of the main islands and fast patrol boats available, the radios are especially valuable in medical and other emergencies.

CSO: 5500/5731

MERGER OF SBS-STBC ADVOCATED

Mbabane THE SWAZI OBSERVER in English 6 Mar 82 p 4

[Editorial: "Put SBS-STBC Under One Roof"]

[Text]

WE have learnt with interest that the Government is to buy Swaziland Television Broadcasting Corporation to the tune of more than E2 million. That is good news ensuring the continuation of the service in a sometimes entertainment starved local population.

It is disturbing, however, to note that the company which established the station has run into financial difficulties within less than five years after it was established. We hope there will be an overhaul of the management to avoid the financial problems that have beset the corporation since it started.

On the other hand, we note that this step has been taken without any signs that the Government will try to improve the situation at the Swaziland Broadcasting Service. SBS, operating since 1966, has been suffering from chronic staff and transport shortages up to now. This has resulted in many public complaints about poor programmes from an overworked staff.

We welcome the boosting of the station's FM reception last year to cover the whole country. We wish the Government had also tried to improve news coverage locally. The Third National Development Plan calls for regional reporters in all districts, but so far this hasn't been done.

The local people own more radio sets than television ones. However, be that as it may, we hope buying the station will mean a step towards an attempt to have more locally produced films. This will of course mean injecting even more money into the station's operations.

The programme content, as it is, has almost no bearing on Swazi life. For example, how many locals are interested in dog training programmes?

We also wonder how STBC staff salaries will be affected, now that it will be parastatal. It is common knowledge that STBC staff are getting much higher salaries than SBS. Those two electronics media go almost hand in hand, why can't they be under one roof. In most countries this is the case.

This would decrease workloads on news staff who could write for both media. It would also strengthen their advertising teams.

Running STBC and SBS separately would mean two salaries for two directors. This would also apply to deputy directors. If they were under one body the Government might consider paying the salary of one director.

CSO: 5500/5731

BRIEFS

SWEDISH, CHINESE TRANSMITTER SPARES--Ministry of Information and Broadcasting is expecting a consignment of spares for Radio Zambia's Twin Palm transmitters from Sweden and Chinese spares for the Short Horn transmitters are in. Zana [Text] [Lusaka TIMES OF ZAMBIA in English 8 Mar 82 p 1]

CSO: 5500/5730

CNET STUDYING PROJECT TO INTEGRATE PHONE, TELEX, TRANSPAC

Paris REVUE FRANCAISE DES TELECOMMUNICATIONS in French Oct 81 pp 59-60

[Article: "Integration of Telecommunications Services in a Digital Network"]

[Text] The telecommunications services currently available to users require operation of several specialized networks, such as a telephone one, a telex one, Transpac, Telecom 1,... Their characteristics differ widely and the subscriber is given a type of interface depending upon his needs. While certain services can be offered as options by a given network, other services can be accessed only by way of different networks.

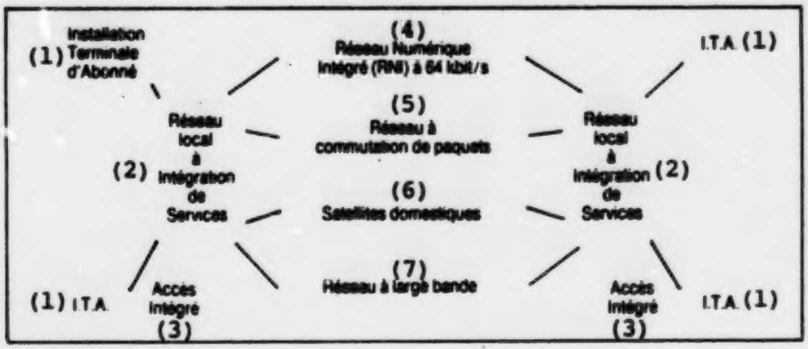
Subscriber needs are tending more and more toward diversification, and their demands toward better quality and total accessibility. These legitimate demands entail problems of cost, operation and maintenance that are growing in complexity. This is what has led the CNET-Lannion A [National Center for Telecommunications Studies at Lannion A] to draw up a transitional strategy toward the future ISDN [Integrated Services Digital Network].

Planning for the Future

The plan drawn up by the CNET-Lannion A was based on the findings of advance-planning studies contained for the most part in the work titled "Telecommunications - Objective 2000" (see REVUE FRANCAISE DES TELECOMMUNICATIONS No 34, Jan 1980). This plan has now been concretized in the form of equipment specifications for that network proposed in the CERISE [Services Integration Interface Center] report, which presents a complete study of an RITD [Integrated Telephony and Data Network] and defines the elements of the Interface Center.

From the user's viewpoint, the integration of services is characterized by a standardized interfacing facility, a uniform procedure for dialoguing with the network, and oneness of interlocutor up to a point, from the standpoint of such as sales, maintenance, billing, etc.

Total standardization of the interface facility is predicated upon availability of a wideband facility, particularly for graphics services. This choice, however, brings to an issue the present distribution network, its copper pairs having in such case to be replaced by optical fibers.


(1) Installation Terminale d'Abonné
(4) Réseau Numérique Intégré (RNI) à 64 kbit/s
I.T.A. (1)
(2) Réseau local à Intégration de Services
(5) Réseau à commutation de paquets
Réseau local à Intégration de Services (2)
(6) Satellites domestiques
(7) Réseau à large bande
(1) I.T.A.
Accès Intégré (3)
Accès Intégré (3)
I.T.A. (1)

Target ISDN defined in CNET study of an integrated voice and data network.

Key:

1. Subscriber terminal installation [ITA].
2. Integrated-services local network.
3. Integrated access.
4. RNI [Integrated Digital Network] - 64 Kbits/sec.
5. Packet-switching network.
6. Domestic satellites.
7. Wideband network.

The RITD study opts for a second alternative, a more realistic one considering the magnitude of investments involved: Keeping the distribution network as is and digitizing the subscriber line to permit simultaneous transmission of voice, data and address-information signals.

The approach taken by the CERISE report, besides advocating a more ambitious network development policy than any known foreign ones, is innovational in more ways than one.

The strategy advocated, after examination of all possible solutions, is designed to satisfy the immediate demand at the same time that the network is being constantly adapted to real demand. Thus, to avoid a classification of services such as would run into a congested network, the services have been defined in such a way as to bring together all imaginable functions. For example, a telephone service connection is established at the request of one or the other of the two interlocutors, but could just as well be established between them at the request of a third.

This strategy is based upon analysis of demand (in terms of services as subscribed for by the customer). Thus defined, the services do not fall into totally independent categories one from the other, but are composite services that can even cross over into the basic services. The concept of class of services emerges directly linked to that of grade of service: The subscriber can order from the network a grade that meets his actual needs.

The concept of grade of service becomes fundamental. Parameters have therefore been defined to enable the grade to be specified: Measurement of the extent to which service is required by the subscriber, and methods enabling overall specification of service, taking into account their interaction.

This strategy is moreover a "gentle" strategy of introduction, based on a finely detailed knowledge of the existing network. Other studies, also carried out at Lannion A, addressed particularly the characterization of the local network; the CERISE plan embodies the results of these studies. Thus, a graduated strategy of implementation in four stages tied to investment decisions is advocated.

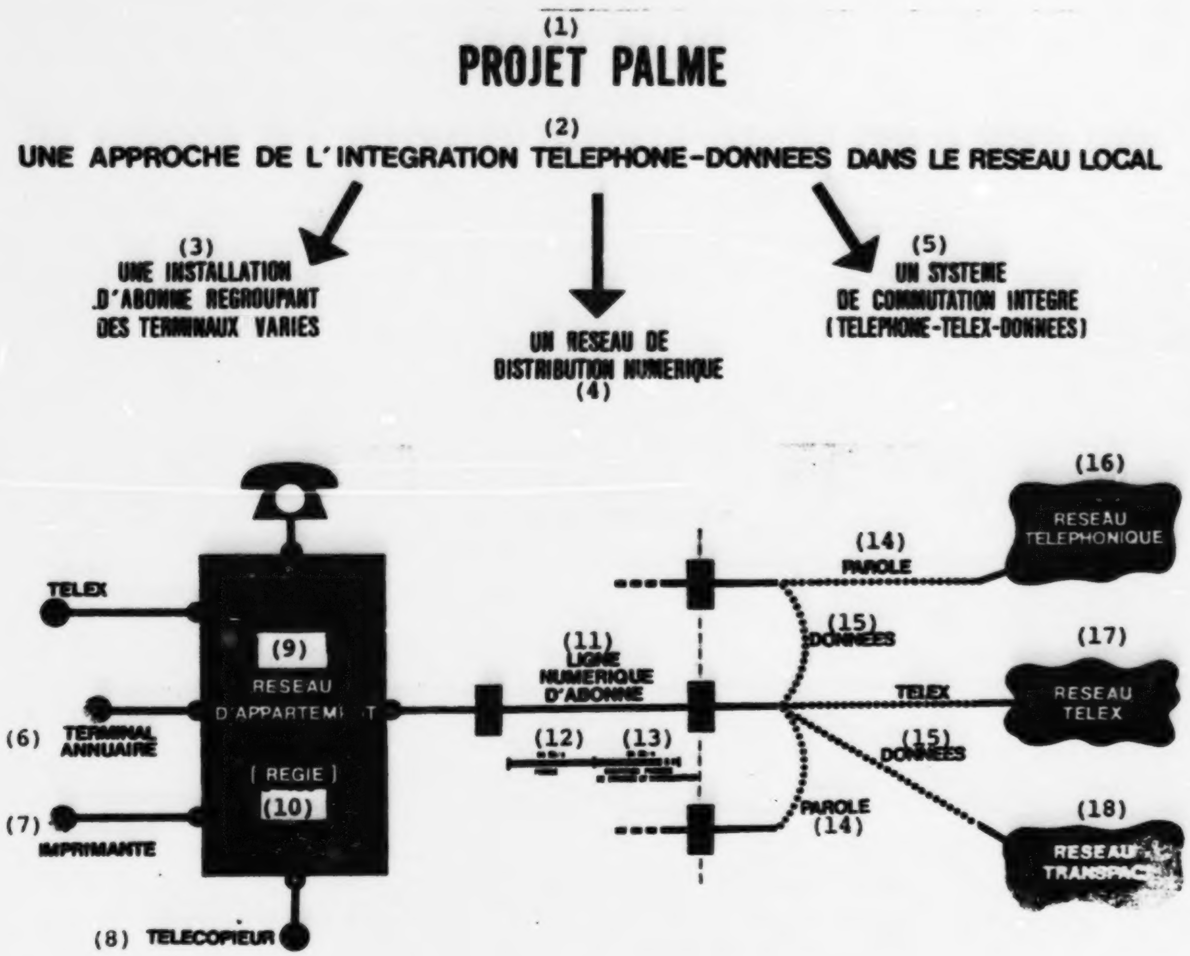
1985-1990: Oneness of access line (digitization of the existing local network through a strategy of superposition).

1990-2010: Oneness of access and grade of service procedures (creation of a superimposed RITD).

Beyond 2010: Conversion of the RITD into an ISDN, replacing metallic facilities with optical fiber facilities (see schematic).

PALME, An Experimental System

Based on the primary considerations in this report, the CNET-Lannion A has begun the study of an experimental automatic switcher embodying the principle of mixed circuit- and packet-switching.


(1)
PROJET PALME
(2)
UNE APPROCHE DE L'INTEGRATION TELEPHONE-DONNEES DANS LE RESEAU LOCAL
(3)
UNE INSTALLATION
D'ABONNE REGROUPANT
DES TERMINAUX VARIES
UN RESEAU DE
DISTRIBUTION NUMERIQUE
(4)
(5)
UN SYSTEME
DE COMMUTATION INTEGRE
(TELEPHONE-TELEX-DONNEES)
TELEX
(9)
RESEAU
D'APPARTEMENT
(6) TERMINAL ANNUAIRE
(REGIE)
(10)
(7) IMPRIMANTE
(8) TELECOPIEUR
(11)
LIGNE
NUMERIQUE
D'ABONNE
(12)
(13)
(14)
PAROLE
(15)
DONNEES
TELEX
(15)
DONNEES
PAROLE
(14)
(16)
RESEAU
TELEPHONIQUE
(17)
RESEAU
TELEX
(18)
RESEAU
TRANSPAC

Key:

1. PALME Plan.
2. An approach to telephone and data integration in the local network.
3. Subscriber installation grouping various terminals.
4. Digital distribution network.
5. Integrated switching system (voice and data).
6. Directory terminal.
7. Printer.
8. Facsimile terminal.
9. Subscriber premises network.
10. Service bay.
11. Subscriber's digital line.
12. 64 Kbits/sec - voice.
13. Multiplexed data and address information packets.
14. Voice.
15. Data.
16. Telephone network.
17. Telex network.
18. Transpac network.

PALME [Multiservices Local Automatic Switching Plan], interfacing with the three principal French telecommunications networks (telephone, telex and Transpac) will make available the four basic services: telephony, telex, data transmission and facsimile.

The subscriber will have peripheral equipment to enable him to access the different services (telephone handset, data terminal, facsimile terminal) all connected to a service bay, which in turn is interconnected with the switching center by means of a digital line.

The principal "technical" options provided by the PALME system are:

--Packetized transmission of data and address signaling exchanged between system command and periphery: subscriber service bays and telephone-, telex-, and Transpac-interface subsets;

--Exclusive use of Protocol X25 to set up communications channels for the routing of packetized data and address-information;

--Hybridized switching of circuits at 64 Kbits/sec for voice and of packets for data and address information;

--Grafting of packet-switching, call processing, operations and maintenance functions on to a common-storage multimicroprocessor system.

The PALME system, designed during the fall of 1979, is now at the stage of actualization: The project is now undergoing the writing of detailed system specifications, internal and external.

It has already enabled verification of certain projective assertions contained in the CERISE report, and has specifically pointed up certain technical and economic implications of the alternative chosen in that report. In particular, it is proving necessary to define a gamut of subscriber service bays, based on subscriber traffic demands and on certain aspects of grade of service, that can satisfy all users. Studies on these aspects are currently being carried out at the Center.

CNET Offers Its Know-How

The CNET is now in a position to offer interested industrialists the CERISE report (around 450 typewritten pages) supplemented by meetings for technical discussions, under terms to be negotiated with each participant. Several industrialists already have a copy of this report under a know-how transfer contract.

PALME could also be of interest to industrialists, in that, the questions resolved at the CNET provide useful information for other projects. The CNET holds two patents in particular on which it is prepared to grant licenses:

--"A time-division digital switching system for MIC [Microwave Integrated Circuit] channels handling packetized voice and data," filed 13 February 1980, No 80.03.181 (CNET/2167).

--"A time-division digital circuit- and packet-switching of channels," filed 23 January 1980, No 81.01.327 (CNET/2186).

The CNET-Lannion A is recommending this dialogue with industrialists, the more so since numerous extensions of CERISE and PALME are as of now either already under way or being planned. Moreover, the P & T Administration's very active participation in the international telecommunications standardization bodies CCITT-CEPT) embodies a number of considerations, of which this RITD study is a major element.

For further information on the integration of telecommunications services in a digital network, contact should be made with:

"Brevets et valorisations des inventions"
CNET
38-40, rue du General Leclerc
92131 Issy-les-Moulineaux

9399
CSO: 5500/2107

NEW TELECOMMUNICATIONS DIRECTOR SPEAKS ON PLANS, EXPORTS

Paris ZERO UN INFORMATIQUE in French Dec 81 pp 38-43

[Interview with Jacques Dondoux, new general director of telecommunications, by Jean-Marc Chabanas and Luc Fayard]

> [Text] ZERO UN INFORMATIQUE (monthly) met with Jacques Dondoux, the new general director of telecommunications, the man who will bring in telematics... Here, he responds to the big questions of the day--ranging from professional videotex through exports and data microprocessing to local networks--that are of concern to all professionals and users of data processing.

[Question] By 1985, 500,000 professional-use videotex terminals... What exactly do you mean by "professional use"?

[Answer] Let me first state that the minister of PTT, Mr Louis Mexandeau, is seeking to develop on a priority basis not only professional use of videotex but also its collective use. Let us dwell a moment on this latter point.

There is collective use when the equipment is installed in a public place, whether that be a post office, a tourist agency, a railroad station, a city hall, a bank, in sum, any premises serving the public. Its use may be either by way of an attendant or of the self-service type. Our interest in promoting collective use is to popularize videotex usage in its professional and domestic applications. In coming months, it will be the object of a vigorous promotion effort by the PTT.

To return to your question, there is, in my view, professional use of videotex simply whenever it is used within the terms of reference of one's occupation. For example, to consult a data bank. This could be in the case of doctors, lawyers, architects, but also the personnel of industrial or commercial enterprises. All our market surveys indicate there is a substantial demand for it.

[Question] And the farmers?

[Answer] Videotex, like the telephone, should help to dispel the geographic isolation of the rural sectors. In keeping abreast of commodity prices throughout the country, etc.

That having been said, the PTT is not planning to develop professional videotex systems of its own. We are offering our participation but we do not want to get involved directly in the furnishing of data for general use.

[Question] The PTT is nevertheless deeply involved in the Teletel experiment at Velizy.

[Answer] At Velizy, we are limiting ourselves to a demonstration of feasibility. Of course, everyone is asking: "What will Velizy be?". The CITV [Teletel Data processing Center at Velizy] will be only what the participants want it to be. If the organizations providing services see a real developmental potential, a niche they can fill in the data-processing market, they will submit their projects. To the extent these projects involve use of the telecommunications network, we are prepared to participate.

The only thing we ask in operations of this type is that the lines of separation between functions remain clearly drawn. Videotex must not be the vehicle for some to suddenly transform themselves into journalists. If doctors, for example, want to organize to receive medical information electronically,that is fine! But the type of information that is currently the province of the professional press or of the general public must remain their respective provinces, even though the transmission facilities be changed. The same safeguards, the same rights and the same responsibilities must exist in the electronic press, should it be developed, as now exist in the printed press. Telematics is not the Far West! There can be no question of obtaining, at whatever price or by whatever means, a concession in a new field that would be opening up to us.

[Question] Let us return to that figure of 500,000 terminals. Are you not apprehensive of the difficulties involved in putting in place a network organization capable of administering a volume of that magnitude?

[Answer] There are today more than 17 million telephone subscribers. Certainly, administering a mere 500,000 more pieces of equipment... Besides, though the line is provided by our monopoly, the videotex terminals will be furnished either by the PTT or by private industry. The user will therefore have, at the low end of the range, a choice of at least two suppliers. If he uses our equipment, we will maintain it. On the other hand, as regards data-services transmission centers, the PTT considering that this field is the province of professional organizations, we will operate only transmission centers furnishing information on strictly PTT-connected activities, such as information on telephone service, postal service, etc.

[Question] Do you have an approximate idea as to the additional load these 500,000 terminals will place on the telephone lines?

[Answer] That presents a problem for us. Will videotex service generate traffic of sufficient volume to justify the lease of an additional telephone line by the user? Only experience will provide the answer. But it must remain clear that the essential thing for the moment is to provide everyone with telephone service, not videotex. The DGT [General Directorate of Telecommunications] is ordering

300,000 videotex terminals this year and, at the same time, 2,300,000 telephone lines. A comparison of these two figures is sufficient to realize the relative importance of the demand needing to be satisfied.

The first videotex terminals in significant quantity will be delivered around mid-1982 and will all be installed by 1983 at the latest. In 1982, we will place a new order for terminals, some of which will be of a higher order of performance. They will be in operation by the beginning of 1984. From 1983 on, our orders will depend upon the demands of the market as regards volume. By then, the terminals ordered will perhaps be of modified types to respond more effectively to the needs of users. On the other hand, it should be understood that the DGT will offer only simple terminals. We feel in fact that the supplying of top-of-the-line videotex terminals does not need our direct support. The need for complex equipment can best be satisfied by private enterprise.

[Question] In this regard, what is your policy with respect to approval of videotex equipment?

[Answer] Equipment must meet the Teletel Franco-European standards. That is the sole constraint. If a piece of equipment of European manufacture and meeting this standard is submitted for approval, I know of no reason why approval should be refused. From a European standpoint, there are agreements, particularly under the Rome Treaty. We respect these agreements, expecting full reciprocity. The problem may be different in the case of equipment coming from countries other than those of the Common Market. For the moment, the situation is wide open. But by 1982-1983, should the problem arise, the government will certainly have provided us with instructions.

[Question] You frequently make reference to the economic rules of the marketplace. When the nationalizations affecting particularly data processing and telecommunications take effect, will we still be in the presence of a marketplace economy?

[Answer] When the state nationalizes a firm, there is a change in the capital ownership and in the ultimate aims of the activities of the enterprise, but that does not change the economic rules to be respected or the rules of competition. A nationalized company, generally speaking, continues to confront other enterprises. The fact that Renault is the property of the state does not mean that it need no longer face stiff national or international competition.

[Question] But is not the telematics market more artificial than the automobile market, it having, in the final analysis, been created and nurtured by the state?

[Answer] It is, above all, new. Where innovation is radical, the market is always difficult to get a pincers on. Remember television. What could be said about it in 1930? Did not RCA take a gamble at that time? As it has recently with the video disk... The more radical is innovation, the more uncertain is success and the less assured it is. This is not a reason to halt technical developments, where these are under the control of the users. In the case of videotex, PTT is proceeding no differently: Like other innovators, it will submit to the choice of users, in a framework that includes several media.

[Question] These new state-of-the-art services that you cite are dependent upon data processing facilities; for example, upon CII-HB computers in the case of Teletel. When demand has increased to the point that you will need very powerful computers that are not available from French manufacturers, where will you go?

[Answer] I repeat, there will be no PTT data-service centers except those strictly related to PTT"s specific functions, such as telephone and postal service information centers. Those operating other centers must decide their policies governing choice of equipment. For our applications, I favor a distribution of data-processing functions. We are presently giving thought to the configuration of our this time. A regionalized solution would respond very well to the government's intended policy. In sum, being as we are transmitters of information by nature, the putting in place of a distributed architecture, with regional centers operating local data bases interconnected among themselves by the PTT network, should present no great problem for us. Certain configurations will of course lend themselves to this type of structure and in such cases we will have to plan on large computers. But it will certainly not be the rule.

[Question] And what are you planning to do in the domain of local networks, which are developing principally under the American banner of the de facto standard set by Ethernet, a standard to which Thomson, in particular, has announced its adherence?

[Answer] Allow me to cite an anecdote. Many trains in France circulate on the left. Do you know why? Simply because our first railway line, which during the 19th century linked Firminy to Rive-de-Gier, was ordered--locomotive and chauffeur included--from the Scots. And that is how the standard for the circulation of trains was created. If our country has fallen behind in a given domain, the wisest solution is to adopt the standard of the most advanced country in that domain. If, on the other hand, national capabilities and developmental efforts are being deployed, there is no reason not to be the originator of standards. I point out in this regard that the Parisian metro travels on the right. The key to being able to choose one's own standard is not to fall behind technologically. To return to the question of local networks, was not the PABX [Private Automatic Branch Exchange] the original real-time switcher? The use of real-time switching in fact constitutes a formidable rival to the looped-line networks you cited above. And, thanks to Louis Joseh Libois, we do not rank last in the domain of real-time switching.

[Question] Let us talk about a market that definitely exists: That of personal information-processing. The some 60,000 users of personal computers and the million owners of pocket calculators in France would like to be able to communicate with each other. Can they not look forward to type-approval of a simple and cheap modem?

[Answer] It would indeed be desirable to study that problem. Since the characteristics of French telephone lines conform to international recommendations, our industrialists should be able to develop exportable modems. And we are prepared to support their developmental efforts.

[Question] Is it possible to look forward to a videotex interface for personal computers?

[Answer] Of course! In fact, they already exist. As soon as videotex equipment is being mass produced, certain subassemblies can be used by the manufacturers of personal computers and it is possible to look forward to future equipment that combines the advantages of both.

[Question] Let us talk now about PTT's policy in regard to exports. Instead of concertion on the European market, as is being advocated by many industrialists, the previous administration appears to have opted for the high road namely, the American market. What is your strategy in this domain?

[Answer] If you analyze what has occurred these past years in telecommunications equipment export sector, you will see that the previous administration did not shine in this sector. The most striking French successes of the last decade came about based on work done between 1965 and 1975 on electronic switching and microwave systems. We exported the E10 system, for example, to 40 countries. To be able to export, we must be able to offer either very cheap products or technologically advanced ones. France will always have a difficult problem to deal with as regards prices, unless we want to see wages drop too low. Let us compete then on technology! We are competitive in the domain of bottom-of-the-line videotex; we must take advantage of this industrially. Our technological lead in this respect favors our penetration of the markets of industrialized countries as much as it does our penetration of developing-country markets. If France proves its competitiveness on the American market, it will then be able to export comfortably to these other countries.

[Question] Is the conquest of the West to continue, then?

[Answer] Definitely. But we must eschew verbal excesses, indeed election-type rhetoric, and not trumpet deals about to be concluded, only to have them suddenly fall through. We are continuing our efforts directed toward the American market, perhaps with more moderate phraseology, but with the same tenacity. In this regard, I am convinced that the state takeover of firms will in no way affect their relations with their American partners. It is not on the basis of who owns the capital that a consumer chooses between buying a Renault or an Alfa-Romeo.

[Question] Is this American market open because there is no American videotex standard?

[Answer] The Americans are not in an industrial wasteland, and you can be sure of that!. They have videotex systems, but no one in particular has taken over the market. The fact is that Great Britain was the first to go into the industrialization of videotex, choosing, however, a standard that is today posing problems to its promoters. The agreement signed from the European standpoint merging French and British standards has resulted in an advanced standard which is moreover now a European standard. The Americans have decided not to choose a standard. They feel a standard will ensue from the product that finally dominates the market. This is typically the American way.

[Question] Is there a slight chance, therefore, for the French standard?

[Answer] If several standards can coexist, France has a very good chance. If standardization, however, leads to the establishment of one standard only, it will obviously be that of Western Electric, an AT & T subsidiary, and in this case, owing to the importance of the American market, that standard could take over entirely. It is not at all certain, however, that there will be only one standard in the United States.

9399
CSO: 5500/2108

ELECTRONIC 'UMBRELLA' PROTECTION AGAINST PIRATE STATIONS

Athens TO VIMA in Greek 25 Feb 82 p 8

[Text] An electronic "umbrella" to protect the entire Attiki basin from radio and television pirates is going to be installed in March. According to verified information from the Ministry of Communications, this electronic umbrella will include a powerful relay station which will be installed on Mount Parnis and will coordinate the direction finders in locating the radio pirates.

In the meantime, after about a year's silence, the pirate of the television channels has appeared again, but this time he is far more cautious. He did not show films, but color photographs of American cigarettes and, for a few minutes, he transmitted music of Kazandzidis. The television pirate's unexpected reappearance occurred on 24 February at 0300. It should be noted that, for a week now, music with a lot of static has been heard coming from television two hours after programs have ended; no qualified person in the Ministry of Communications knows exactly what is happening. At any rate, the picture of the pack of cigarettes, which was projected for three minutes on 24 February, was in color, but with a lot of "snow."

Several months ago, when the television pirate was appearing nearly every day on television, showing movies (with Greek subtitles), and sometimes porno films, the former government decided to extend operation of the television relay stations to prevent the television pirate from penetrating the channels. The relay stations continue to be activated today, for about two hours after the end of programming, despite their high-energy operation. It seems that this time the television pirate-ghost found a way to circumvent this impediment. But with the new electronic machines (made in Japan) which the Ministry of Communications has already procured, locating the pirates will now be very easy.

The agency responsible for installing the electronic umbrella is OTE [Greek Telecommunications Organization], which is cooperating closely with the Ministry of Communication's directorate for "illegal radio stations" on matters related to locating the radio pirates.

As became known, the new machines procured by this directorate will make it possible to locate any illegal radio or television broadcast occurring in the Attiki basin, whether transmitted on medium waves or FM. Up to now, the authorities were able to locate broadcasts transmitted only on medium waves, since the direction finders they used were obsolete.

All the ministry's mobile crews will use these modern direction finders and will be connected to the special relay station which will be installed on Mount Parnis. This relay station will be the "electronic eye" for those pursuing the radio pirates. It will also be automatically connected with the Gendarmerie Headquarters so that police authorites in the area where illegal programs are being broadcast can be notified and can intervene in time. The coordinating center for movement of crews with direction finders will be located on Syngrou Avenue, in the mansion which houses the Ministry of Communications. As was made known, an allocation of 15 million drachmas was made available for purchasing these machines.

9247
CSO: 5500/5334 END

JPRS 80607

19 April 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 212

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 80607

19 April 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 212

CONTENTS

WORLDWIDE AFFAIRS

Briefs
Radio-TV Agreement Signed 1

ASIA

NEPAL

Second Telephone Exchange for Kathmandu
(THE MOTHERLAND, 20 Mar 82) 2

Work To Begin on Earth Satellite
(THE RISING NEPAL, 26 Mar 82) 3

NEW ZEALAND

'REUTERS' Plans for High-Speed Communications Outlined
(THE PRESS, 2 Mar 82) 4

Briefs

Agricultural Database Seminars 5
Computer Society Meeting 5
State Insurance Computers 5

PAKISTAN

Effect of Television on Reading Criticized
(THE PAKISTAN TIMES, 21 Mar 81) 6

International Gateway Exchange Overworked
(DAWN, 21 Mar 82) 7

Briefs

Telephone Connections 8
SUPARCO Chairman to New York 8

THAILAND

Soviet-Built Laos Satellite Station Transmission to Thailand (Chumsin Plianla-o; NATION REVIEW, 19 Mar 82)................. 9

Briefs

New Radio Transmitter 11
Satellite Stations Planned 11

NEAR EAST AND NORTH AFRICA

KUWAIT

Briefs

Satellite Ground Station Inaugurated 12

SUB-SAHARAN AFRICA

CHAD

Briefs

French Aid 13

SENEGAMBIA

Briefs

Automotic Telephone Link 14

SOUTH AFRICA

Briefs

Swazi Radio Service 15

ZAMBIA

Computer Society Asked To Help PTC Solve Problems at Lusaka Exchange (TIMES OF ZAMBIA, 22 Mar 82)............................... 16

WEST EUROPE

DENMARK

Briefs
Teledata Tests Beginning 17

FINLAND

Study Group Urges Greater State Role in Telecommunications
(UUSI SUOMI, 9 Mar 82).. 18

FRANCE

ESA Seeks Long-Range Plans for Launchers, Satellites
(Patrice Prevot; AVIATION MAGAZINE INTERNATIONAL,
1-14 Mar 82)... 21

Research Center Develops Terminal Integration System
(Michel Jarlaud, Eliane Monmaur; REVUE FRANCAISE DES
TELECOMMUNICATIONS, Jan 82)................................ 27

NETHERLANDS

Government Note on Satellite, Space Activities
(Fred Kappetijn; ELSEVIERS WEEKBLAD, 13 Mar 82).............. 34

New Public Computer Communications Network
(DE TELEGRAAF, 5 Mar 82).................................... 39

Experimental Two-Way Cable TV Planned in Limburg
(NRC HANDELSBLAD, 16 Mar 82)................................ 41

NORWAY

Briefs
Agency to Start Postfax Service 43

BRIEFS

RADIO-TV AGREEMENT SIGNED--Moscow, 31 March (TASS)--A first long-term agreement on cooperation between the USSR and Greece in the field of TV and radio broadcasting has been signed in Moscow today. Provision is made for exchanging television and radio programmes on the life of the Soviet and the Greek people, mutual assistance in preparing programmes about the major developments in the USSR and Greece. The document was signed by chairman of the USSR State Committee on Television and Radio Broadcasting Sergey Lyapin and the General Director of the Greek Television and Radio Broadcasting Yeoryios, Romeos. [Text] [LD312044 Moscow TASS in English 1915 GMT 31 Mar 82]

CSO: 5500/2186

SECOND TELEPHONE EXCHANGE FOR KATHMANDU

Kathmandu THE MOTHERLAND in English 20 Mar 82 p 1

[Text] Minister of State for Communications Fateh Singh Tharu laid the foundation stone for the second telephone exchange building at the precincts of Central Telephone Exchange at local Sundhara yesterday

The building to be equipped with twenty thousand line capacity will be constructed at an estimated cost of 5.35 million rupees.

Equipment of ultra-modern digital exchange system as well as that required for subscribers trunk dialing STC services will also be set up at the new building.

While the building is targetted to be completed by mid April 1983 all equipment will be installed within three years.

STD services will be made available to 34000 customers including 20000 of the Kathmandu valley.

Initially however, semi automatic services will be provided through the building to the customers with the completion of the earth station project, and switch over to direct dialing made later.

In view of the growing demand for telephones in the Kingdom 23750 additional telephones will be installed in the next three years. Of them, 12,000 will be for Kathmandu, Patan and Bhaktapur.

Equipment of half of the ten thousand additional lines to be provided to Kathmandu will be installed at the Naxal telephone exchange building and those for the other half at the second exchange building.

CSO: 5500/5749

WORK TO BEGIN ON EARTH SATELLITE

Kathmandu THE RISING NEPAL in English 26 Mar 82 p 1

[Text]

Kathmandu, March 25: Installation of the electric power and communication equipment at the Sagarmatha satellite communication earth station of Balambu will start next month, it is learnt, reports RSS.

The task of erecting the main antenna that directs and receives signals from the Indian Ocean satellite will also be carried out simultaneously.

The antenna, towers, the electric power and communication equipment will be flown in here in two consignments at the end of March and the first half of April.

The project being implemented through the joint cooperation of the His Majesty's Government of Nepal and the government of the United Kingdom is scheduled for completion by October 1982.

CSO: 5500/5749

'REUTERS' PLANS FOR HIGH-SPEED COMMUNICATIONS OUTLINED

Christchurch THE PRESS in English 2 Mar 82 p 18

[Text] PA Wellington

A global explosion in methods of communication, giving the ability to transmit words at a rate of five million a minute, was noted by the managing director of Reuters news agency, Mr Glen Renfrew, in an interview with the NZPA.

Mr Renfrew said the speed of improvement in communication methods was emphasised when it was recalled that only 15 years ago transmission by teletype at 100 words a minute was considered "pretty good."

Mr Renfrew was in New Zealand with other Reuters representatives for discussions with executives and directors of the Press Association, which is a shareholder in Reuters, Ltd.

He said Reuters had become a very big business with some 25,000 electronic terminals installed worldwide from which subscribers in banking, commodity dealing, brokerage and industry interrogated its computers to get money rates, commodity quotations, securities prices, business news, and general news.

"This is growing very rapidly."

Reuters had first moved into computer-based news in 1964, and the progress made since had been due to the technological revolution and to international development of the money business.

The agency was now going into the second phase of the technological revolution by moving into very much higher transmission speeds.

This entailed using broadband communications of a type hitherto used for television transmission. This would cope with demand for much faster delivery, enlarged services, and many more customers.

Reuters had a transponder on an American domestic satellite from which it transmitted data, news and information at speeds around five million words a minute.

Mr Renfrew said Reuters wanted to exploit that technology and had now set up a subsidiary company in the United States to develop the systems and the subscriber terminals to work at such high speeds.

A big advantage of satellite use was that once it was in orbit it was to easy to extend services to other countries — "it is not like having to lay cables as we used to have to do in the old days."

He said he and other Reuter representatives had talked to executives in Europe, Hong Kong, Japan, and Australia formally and informally about the need to move into high speed communications."

This method of transmission lowered the unit cost of delivering services. It was very expensive to get into, but once the basic cost had been paid for the trunk communications it was very economical.

The satellite technology had not been used outside the United States but there it had created a much bigger news market.

"The central purpose of Reuters is still to produce international news services of the highest possible standard and we are expanding our reporting network worldwide. We are going to open 12 new bureaux this year and strengthen quite a lot of others which will be of obvious benefit to our services to press and broadcasting. We could not afford to do it if we had to rely on the revenue we're able to get from press and broadcasting alone."

The new technology could have ready application in New Zealand.

Reuters had developed a cheap interrogation terminal and was developing a cheap facsimile terminal. It was already using a variety of satellite receiver dishes, some at high speed and some at low, and the cheapest was about 609mm across and with associated electronics could be built for about $500.

"Put a facsimile receiver with it and there is an ideal way of getting instant information to remote areas of North America where farming is big business and there are farmers prepared to pay to receive up-to-the-minute market information," Mr Renfrew said.

"We are sure a similar market exists in most areas where there is a similarly developed agricultural economy."

CSO: 5500/9027

NEW ZEALAND

BRIEFS

AGRICULTURAL DATABASE SEMINARS--A series of seminars will be held this month in Wellington and Auckland on the Commonwealth Agricultural Bureaux's (C.A.B.) on-line retrieval service. The C.A.B. provides a range of information services for agricultural science and is controlled by an executive council comprising 26 Commonwealth countries including New Zealand which contribute to C.A.B. funds. The C.A.B. will be represented by Mr Mark Furneaux, training officer. C.A.B. liaison in New Zealand will be carried out through meetings with Dr Graham Butler of the Ministry of Agriculture and Fisheries, Wellington, with assistance from Mr Doug Gibbs, who is responsible for organising the seminars and workshops there. Over a million and a half references to the world's literature on agriculture and related fields of applied biology can be searched with speed and accuracy using on-line database services available from C.A.B. Every year the information is updated with a further 150,000 abstracts. The references are updated on a monthly basis. The system contains all the world's related literature from 1973 and is constantly being added to and expended. The C.A.B. abstracts database is available on-line through various computer facilities including Lockheed Dialog, European Space Agency's I.R.S. and Dimdi. A typical search of all the world's literature for any related agricultural subject takes about 20 minutes. [Text] [Christchurch THE PRESS in English 2 Mar 82 p 23]

COMPUTER SOCIETY MEETING--The first meeting of the New Zealand Computer Society for 1982 was a demonstration of the capabilities of microcomputer systems. On display were five different microcomputers. Mr Derham McAven, from Christchurch Polytechnic, started the meeting by summarising major microcomputer concepts and then invited attendees to inspect the hardware and software on display. A special feature of the demonstration was a communication link between three of the microcomputers using a local area network product. This illustrated the compatability benefits obtainable when suppliers base their products on the CP/M or MP/M operating systems. [Excerpt] [Christchurch THE PRESS in English 2 Mar 82 p 23]

STATE INSURANCE COMPUTERS--The Datapoint Corporation has installed in Wellington the first computer system in a pilot contract with the State Insurance Office. The State Insurance network will be a distributed network of Datapoint computers communicating with the IBM mainframes at the Government's Cumberland Computer Centre. Datapoint systems installed in branch offices will give State Insurance Office staff access to customer information. The network will operate under the IBM SNA network architecture. [Text] [Christchurch THE PRESS in English 2 Mar 82 p 23]

CSO: 5500/9027

EFFECT OF TELEVISION ON READING CRITICIZED

Lahore THE PAKISTAN TIMES in English 21 Mar 82 p 4

[Text]

A survey by the National Book Council of Pakistan reveals that the reading habit in the country is on the decline. It says that children are no longer attracted by books and even those of the older generation who used to read before going to bed spend their time watching TV. The survey blames the growing appeal of TV for the decreasing public interest in books. The other factor responsible for this is lack of library facilities. There are few well-equipped public libraries, while colleges and schools don't have the funds to provide books to students.

For the people in the book trade and those who still have some lingering interest left in books the finding will not come as a surprise. The rate of sale of books has gone down steeply over the years; there was a survey some time back which showed that Pakistanis spend more money on knick-knacks than on books. An author's is a hard life in Pakistan; one cannot live by writing books. Literary writings particularly are at a low ebb; the demise one after another of a number of literary magazines is a testimony to this. The vacuum has been filled by the "digests" purveying low grade, escapist literature. A word of praise is necessary here for the few authors who still have the spirit and the stamina to continue to produce quality stuff in these daunting circumstances. TV everywhere has weaned people away from books. Today's kid, whether in the East or West, spends more time before TV than in his classroom. Pakistan is no exception. In our case the low rate of literacy further complicates the situation. About 80 per cent of our people are strangers to the world of books. Those who would like to buy and read books run into the wall of high prices. This has been an important factor in discouraging the reading habit in the country.

But there is more to it than prices and the influence of TV. As the NBCP survey indicates, the increasing aversion to book goes beyond such variable factors and is of a more fundamental nature. It has its roots in the larger question of society's attitude to intellectual pursuits. People don't read books not because of TV or the lack of library facilities but because the person who reads books commands no respect in society. There has been a change in the value system. The survey makes the alarming finding that the young are guided solely by considerations of material gain, and books don't yield money, at least not in our midst. The ideals and goals have changed. The overriding concern today is to make a quick buck by any means, not to be a useful, productive member of society. The so-called intellectual professions are at a discount. Instead, the striving among most of today's youth is to convert a bright commercial idea into millions overnight. Perhaps this is what has given rise to the "Dubai mentality". In such circumstances, books are apt to lose their value and relevance. But a community is not sustained by entrepreneurs, businessmen and technicians alone. Writers, thinkers and philosophers are equally unnecessary for the balanced growth of civilisation and society. The trend away from books should set us thinking.

CSO: 5500/5744

INTERNATIONAL GATEWAY EXCHANGE OVERWORKED

Karachi DAWN in English 21 Mar 82 p 9

[Text]

The International Gateway Exchange is handling an average 85,000 overseas calls per month with a total revenue of Rs 12.6 million including a foreign exchange earning of Rs. 8 million, Mr. A.R. Qureshi, General Manager, Overseas Telecommunication Regions Karachi, told a news conference on Saturday.

To reduce the pressure at the Exchange, he asked the telephone subscribers to convert their telephones to the International Subcribers Dialling system (ISD) at a nominal fee of Rs. 50 This will enable them to dial directly to 14 countries. And for the rest, the calls will have to go through the Exchange (No. 0102).

The 25,000 lines capacity ISD (system) presently is underutilised — according to the General Manager 90 per cent of the capacity is lying idle.

He said ISD would be linked to the United States within the next two to three months after an agreement is reached.

He further disclosed that after the expansion of the satellite earth station this month about 48 more circuits will be establishd with Saudi Arabia, UAE United States and the UK.

The Gateway Exchange is connected through ISD with 14 countries on direct circuits, viz. Bahrain, France, Italy, Iran, Ireland, Japan, Kuwait, UK Oman, Switzerland, Singapore, Saudi Arabia, the UAE, and West Germany.

An order has been placed with the manufacturers to increase the exchanges booking enquiry and national circuits facilities. This work will be completed by next year. Plans for its expansion are also under the consideration of the Government, he said.

CSO: 5500/5744

BRIEFS

TELEPHONE CONNECTIONS--The number of working telephone connections throughout the country is about 350,000 at the moment. This was disclosed by Mr. A. R. Qureshi, General Manager of the Overseas Telecommunication region, Telegraph and Telephone Department, here yesterday. He said of these telephone connections about 270,000 were of the automatic type (i.e., the instruments had dials and the subscriber could ring up any number he wanted). The remaining 80,000-odd instruments did not have dials, and the subscribers concerned had to ask the operator to connect them to the desired number. Mr. Qureshi said that the 350,000 existing telephone connections worked out to a per capita number of four or five instruments per 1,000 of the national population.--AFP [Text] [Karachi MORNING NEWS in English 21 Mar 82 p 5]

SUPARCO CHAIRMAN TO NEW YORK--Mr Salim Mehmud, Chairman Pakistan Space and Upper Atmosphere Research Commission, left here yesterday for New York to represent Pakistan at the 25th session of the UN Committee on the Peaceful Uses of Outer Space being held in New York from tomorrow to April 2. The membership of this committee totals to 53 including Pakistan. The committee reports to the General Assembly and is assisted in its work by two subcommittees named as Scientific and Technical Sub-Committee and the Legal Sub-Committee. The committee deals with space science and technology matters at the UN level. Some of the items on the agenda of the committee deal with formulation of principles for regulating the remote sensing activities of nations operation of direct broadcasting satellites, use of nuclear power source in space, definition of limits of outer space and its linkage with geostationary orbit and other activities of nations in space. The committee is also acting as advisory body for UNISPACE 82 conference which will be held in Vienna in August to highlight the peaceful uses and applications of space said a Press release yesterday. [Text] [Karachi MORNING NEWS in English 21 Mar 82 p 5]

CSO: 5500/5744

SOVIET-BUILT LAOS SATELLITE STATION TRANSMISSION TO THAILAND

BK190453 Bangkok NATION REVIEW in English 19 Mar 82 p 1

[Article by Chumsin Plianla-o]

[Excerpts] The Soviet Union has constructed a satellite station in Laos that will, among other things, enable Moscow to relay to Vientiane television programmes which may be received by certain Thai northeastern provinces, a senior Bangkok-based Laotian diplomat told THE NATION yesterday.

The diplomat said the "inter-Sputnik satellite station" was officially handed over to Laos late last month. The communications system also links direct long-distance phone and telex service between the two nations.

"The Laotian people can now receive Russian TV programmes on two channels through the satellite," said the official, who asked to remain anonymous.

He said the Russians began construction of the satellite station on September 1980 and completed it on February 19.

The official of the Laotian Embassy in Bangkok said the satellite station was part of the Soviet assistance to Laos under an agreement concluded on October 5, 1978.

Describing it as "a gift" from the Soviet Union, he said he had no idea how much the construction of the station cost.

He added that the satellite station comprises two units--a ground station on the outskirts of Vientiane and a relay station within the capital.

"The scanner disc is 12 metres in diametre and the scanner post is about 108 metres high," he said of the size of the ground station.

The official said Laotian people have been watching TV programmes transmitted from across the Mekong River on Channel 5 and Channel 7 of Thailand.

"We have no policy to prohibit Laotian people from watching Thai TV programmes," he added.

Informed sources view the presence of the satellite station as an attempt by the Soviet Union to have direct contacts with Laos without having to go through Vietnam.

"Moscow and Vientiane can now make direct communications," one of the sources said.

However, a senior Thai official who claimed to have been watching the development of the construction of the satellite said that it had not yet begun functioning.

THE NATION contacted local authorities in four northeastern provinces, Nong Khai, Loei, Nakhon Phanom and Ubon Ratchathani, which border Laos yesterday and were told no TV programmes from Laos had been received so far.

However, a technician in Loei said with proper antenna it was possible that Thai viewers there can receive programmes from Laos.

CSO: 5500/5748

BRIEFS

NEW RADIO TRANSMITTER--On 25 March Prime Minister's Office Minister Chan Hanutham inspected the site of new 1,000-kilowatt transmitter of radio Thailand located in Nong Khae District, Saraburi Province, which is a boast of the old 100-kilowatt transmitter. Construction of the station which started in September 1979 was completed in September last year, and the station has been operating satisfactorily on an experimental basis. The radio transmitter power can cover almost all areas of the country during daytime and all areas of the country as well as neighboring countries during night time. The station, located on a 300-rai plot of land will use electricity supplied by the provincial electricity authority of Thailand at a cost of 2 million baht per month. Official broadcasting of the radio station is scheduled on 3 May. [BK311249 Bangkok Domestic Service in Thai 1300 GMT 25 Mar 82]

SATELLITE STATIONS PLANNED--Governor Chao Thongma of the Communications Authority of Thailand said that the authority has a plan to set up a network of 14 satellite signal receiving stations in provinces throughout the country with the main station being located in Si Racha District, Chon Buri Province. When the plan is completed, people throughout the country will be able to simultaneously receive television programs relayed from Bangkok. It will also facilitate the long-distance telephone, telegraph and telex services as well as will make possible in future the international automatic long-distance telephone service. [BK311249 Bangkok Domestic Service in Thai 0000 GMT 29 Mar 82]

CSO: 5500/2186

BRIEFS

SATELLITE GROUND STATION INAUGURATED--Kuwait, Feb. 27--Kuwait today inaugurated its third satellite ground station, an official press release by the Ministry of Communications said. Like its two predecessors, the new 'Earth Station' is located in Umm Al Aish, close to the border with Iraq. Minister of Communications Essa Muhammad Al Mazidi personally declared the station operational today in the presence of Undersecretary Abdul Rahman Al Ghuneim and other senior officials. The new ground communications system is designed to cope with increasing demands on international communications between Kuwait and rest of the world, it is being stressed. All the ground stations are linked to 9 network of satellites operated by Intelasat (International Telecommunications Satellite Organization) founded in 1964. Kuwait had joined that organization in 1966. The third station has been designed and built by Nippon Electric of Japan at a cost of KD 2.7 million. Its initial capacity is 324 channels and its antenna is pointed to the Indian Ocean Region satellite serving the countries of the region. Ground stations dotted around the world serve as reflectors communicating signals of information to the orbiting satellites. Telephone calls, Radio and TV broadcasts and other information can be conveyed by the satellite network. From the satellite, any information can again be re-transmitted to the ground stations. [Text] [Kuwait ARAB TIMES in English 28 Feb 82 p 1]

CSO: 5500/4714

BRIEFS

FRENCH AID--Ndjamena, 2 Apr (AFP)--A loan agreement worth 150 million CFA francs for the renovation of Chadian National Broadcasting (RNT) was signed Wednesday by French ambassador to Chad Claude Soubeste and Chadian Minister of Foreign Affairs Ahamat Acyl. The loan will be used to procure broadcasting equipment and improve the listening quality of the station through the reconstruction of transmitters. Under the terms of the agreement, Radio Chad will be equipped with three vehicles for field reporting. The RNT suffered serious damage during the fighting in Ndjamena. It was repaired recently by French technicians. [Text] [AB021135 Paris AFP in French 0938 GMT 2 Apr 82]

CSO: 5500/5743

BRIEFS

AUTOMATIC TELEPHONE LINK—The automatic telephone link between Senegal and Tunisia will be inaugurated on Monday, 5 April, with a telephone conversation between President Abdou Diouf and his Tunisian counterpart. [AB040628 Dakar Domestic Service in French 2000 GMT 2 Apr 82 AB]

CSO: 5500/5743

BRIEFS

SWAZI RADIO SERVICE--The eight service by the South African Broadcasting Corporation for black listeners, known as Radio Swazi, begins broadcasting from Pretoria this evening. Radio Swazi will be broadcasting to about three quarters of a million Swazi listeners. [Text] [LD011740 Johannesburg International Service in English 1500 GMT 1 Apr 82]

CSO: 5500/5745

COMPUTER SOCIETY ASKED TO HELP PTC SOLVE PROBLEMS AT LUSAKA EXCHANGE

Lusaka TIMES OF ZAMBIA in English 22 Mar 82 p 7

[Text]

ZIMCO director-general Mr James Mapoma has appealed to the Computer Society of Zambia to help the Posts and Telecommunications Corporation (PTC) in solving problems at its main exchange in Lusaka.

Addressing the society's annual general meeting at the Zambia Railways training centre in Kabwe at the weekend, Mr Mapoma wondered why the new exchange fitted with latest machinery caused congestions in telephone communication.

The society had a "tremendous" role to play in the propagation of the use of computers "and I do hope that in doing so, you will be able to guide us to achieve the best and most useful results from the use of computers".

"In the minds of many, computers are complex animals and I feel that your society can play an important part in explaining — in lucid terms — to the layman that the computer animal — though complex — is a very useful one capable of performing simple wonders."

In assessing the country's needs and the extent to which her people used sophisticated tools and latest technology it was necessary to consider the overall economic and sociological effects like manpower utilisation and the cost of implementation.

"In a developing country like ours, resource allocation to meet different and often conflicting demands is difficult. "It is necessary always, therefore, to ensure that available resources are utilised and available facilities exploited to the maximum before additional resources are committed in the same area."

Mr Mapoma reminded the society that computers — whether for data processing or process control in industry — were extensively used in Zambia by the Government, industry and trade as well as parastatal organisations.

Zimco with its subsidiaries and associate companies was "heavily committed" to the use of computers for data processing. In the mining industry, computer-based systems were used extensively.

"Zambia Railways have their installation here in Kabwe and I understand they are presently shopping for a better machine to handle the growing needs for information processing."

CSO: 5500/5747

DENMARK

BRIEFS

TELEDATA TESTS BEGINNING--Yesterday Denmark took a cautious step forward into the world of telecommunications when the Postal and Telegraph Service in cooperation with the telephone companies KTAS [Copenhagen Telephone Company], the Funen municipal telephone company and Jutland Telephone, began a 2-year trial period of teledata. Telecommunications director Ib Lonberg made the first call, the buttons worked and the first data pictures flashed on the screen. The 200 to 300 subscribers to the project can draw on about 50 information sources, including the state and the daily press, via the scanner. Division chief Helge Mansa of KTAS talked about the construction of the project. He stressed that Danish experience had been gained already since Bang & Olov, Struer, had supplied the first 200 Danish receivers and the firm of Chr. Rovsing had developed the computers while the firm of Lars Valentin, Stenlose, produced the 250 very special keyboards for the trial. Further developments were made on the basis of experiences abroad so that technically the Danish system is more advanced than systems currently in use in England and Germany. Division engineer Jorgen Mehl of Jutland Telephone talked at the opening ceremonies of their hopes for the trial period. He demonstrated how users can send tele-mail to each other. [Text] [Copenhagen BERLINGSKE TIDENDE in Danish 31 Mar 82 p 5] 6578

CSO: 5500/2180

STUDY GROUP URGES GREATER STATE ROLE IN TELECOMMUNICATIONS

Helsinki UUSI SUOMI in Finnish 9 Mar 82 pp 6-7

[Article: "Study Group Would Give Telecommunications to State"]

[Text] Telecommunications should be concentrated in the hands of the state, proposes the telecommunications study group, which presented its report to Communications Minister Jarmo Wahlstrom (Communist) on Monday.

The League of Telephone Companies stated in a dissenting opinion that this is a question of an aspiration to establish a monopoly by which the position of the Postal and Telecommunications Service will be strengthened at the expense of private telephone companies.

In the opinion of the majority in the study group the state would be principally responsible for the management and development of telecommunications activities. Others would be able to pursue such activities only with the permission of the Ministry of Communications.

The study group, which was recently established by Communications Minister Veikko Saarto (Communist), was directed by Valto S. Rauvanto.

At this time telecommunications includes data transfer, telefax, and telset, among other things, in addition to telephone and telegraph communications.

Interpretation Controversy Over Application

The diverstification of communication has resulted in differences of opinion regarding the application of laws. The study group unanimously considers that a clarification of the situation will require total legislative reform.

However, this unanimity did not go beyond this. Differences of opinion began already with the principles of a new law.

Precisely Limited Permits

In the proposal concerning the division of work the majority in the study group proceeds from the fact that the Postal and Telecommunications Service would handle foreign communications, communications between network groups, telegraph and telex communications, local communications in their own area of operations as well as communications occuring in the special networks of the state.

The responsibility of the licensing establishment would be to manage all telecommunications occuring in the telephone network. As need would dictate the Postal and Telecommunications Service would, however, take care of the telecommunications services required by state offices, institutions, and enterprises. The Postal Service would also be given data transfer services when the customer wants a total data transfer service that goes beyond the limits of the area defined by the operating license.

The detailed division of operations would be defined by strictly deliniating the activities of individuals possessing a permit.

Opposed to Nationalization

Section Chief Reijo Svensson of the League of Telephone Companies states in a dissenting opinion that this report does not correspond with the requirements established in the legislative bill. He considers that the whole premise of this work has only been to strengthen the position of the Postal and Telecommunications Service at the expense of private telephone companies.

According to Svensson aspirations to establish a monopoly are also apparent in the fact that an attempt is now being made to tighten the long-distance communications monopoly by the strength of the law.

Office Chief Kauko Pursiainen of the Finance Ministry emphasizes in a dissenting opinion that a tighter concentration of this business in the hands of the Postal Service does not comprise a suitable basis, for example, for solving the telecommunications conflict. He considers that concentrating data transfer services primarily into the hands of the Postal Service does not always correspond with the interests of the user.

Pursiainen considers that the proposal of the study group places too much emphasis on the interests of the parties pursuing telecommunications activities, which are not always to the benefit of the consumer.

More Power to the State

Representatives of the Postal and Telecommuncations Service, graduate engineer Aulis Salin as well as General Manager Pekka Luukkainen consider in a joint opinion that the proposal of the study group favors private telephone companies. They consider that the management of new telecommunications services should not be given to private companies even in a limited form.

Salin and Luukkainen also do not approve of the fact that the Ministry of Communications would become the party responsible for issuing licenses instead of the Postal Service. They also propose a statute by which general information services would be made subject to licensing.

Telephone Companies Want a Committee

Managing Director Arno Tanhuanpaa of the League of Telephone Companies is analyzing the study group's report. In a stand concerning this issue he considers that the work of the study group is not impartial. According to Tanhuanpaa this is partially the result of the make-up of the study group. Five officials represented the state's telecommunications activities, one the Finance Ministry. The only member outside of state administration was from the League of Telephone Companies.

Tanhuanpaa emphasizes that the principle of free enterprise should be carried out in our country's telecommunications system. He considers that legislative reform requires an impartial and broadly based committee. The users of telecommunications should also be represented in the committee.

Assistant Director Paavo S. Vepsa of the Central Chamber of Commerce considers that the proposal of the study group threatens to freeze technical development in this whole area. According to him there is no reason to commence legislative actions on the basis of this report.

Vepsa strongly disapproves of the overall prohibitive mentality of the law proposal: what is not particularly defined as permissible is prohibited. According to Vepsa the principle of permissibility should, on the contrary, unconditionally prevail for the benefit of the consumer.

Vepsa hopes that the whole telecommunications law will be reconsidered in a parliamentary committee in which business interests representing the consumer will also be included.

10576
CSO: 5500/2164

ESA SEEKS LONG-RANGE PLANS FOR LAUNCHERS, SATELLITES

Paris AVIATION MAGAZINE INTERNATIONAL in French 1-14 Mar 82 pp 24-25, 27, 29

[Article by Patrice Prevot: "European Launchers: From One Stage to Another"]

[Excerpts] In late January, the European Space Agency (ESA) officially approved development of the Ariane 4 launch vehicle. This improved follow-on version of the Ariane will chiefly enable Europeans to increase their competitiveness in the space launch services market during the period 1986-1995. But the Old Continent is also already studying concepts for a launch system to succeed Ariane 4. This is a "tall order," however, in that it involves defining a new launcher without having complete knowledge of its future missions. A vast undertaking.

France made its go-ahead decision on Ariane 4 back on 15 October 1981. Since then, ESA member nations* have made formal commitments to participate in this program at an estimated cost of 1.5 billion francs, including a 20 percent margin for technical contingencies.

This program is a new important stage for Europeans because Ariane 4 is not only meant to extend Europe's independence in the space launcher field but also very sharply increase its competitiveness in the market for space transportation systems during the period 1986-1995, not to mention the fact that it will also ensure continued work beyond 1985 for those manufacturers who have a large stake in this program.

In Arianespace, the organization responsible for marketing Ariane launches, officials estimate Ariane 4 can potentially capture 70 percent of the total Free World satellite-launching market from 1985 to 1991. In other words, this could mean launching 178 satellites of that period's estimated international market of 258 units, exclusive of American military satellites and launches in the USSR and other communist countries. These sales prospects are based on improvements in the Ariane family which are expected to reduce launch costs and produce a more flexible launch vehicle capable of greater adaptability to user requirements.

---

* Germany, Belgium, Denmark, Spain, France, Italy, Netherlands, United Kingdom, Sweden, and Switzerland.

A 'Spark Plug'

But Europeans could not shilly-shally any longer in approving development of Ariane 4. It will be recalled that, despite the reluctance of some countries in the Ariane program, the decision to initiate developments of versions 2 and 3 were made before 25 December 1979, the date of the launcher's first qualification test firing.

A decision in which France--with its reported 54 percent share of Ariane 4's financing--again served, through its CNES [National Center for Space Studies], as the spark plug with respect to its European partners, a role which it definitely intends to continue to play. As explained by Yves Sillard, CNES chairman and managing director: "If the December 1979 decision had not been made when it was, we would not have been able to keep pace with the competition and meet current market needs. Indeed the fact is that Ariane 2 and 3 are, at the present time, Europe's war horses in the international spacecraft launcher market."

It was definitely in this spirit that France pushed for approval of Ariane 4 so as to have the capability, by 1986, of placing a maximum 4.3-ton payload in geosynchronous transfer orbit. One of the objectives sought through this program is to retain Europe's competitiveness in the geosynchronous orbit market. In this field, Europe has benefited from the fact that the Americans--too engrossed by development and testing of their space shuttle--did not proceed to improve their conventional launch vehicles.

What Future Missions?

Beyond development and production of the Ariane 4 launcher, Europeans are already discussing the possible design of a follow-on space transportation system, because space officials concur in estimating Ariane 4's service life to be approximately 10 years.*

The difficulty lies in defining a new launch vehicle without full knowledge of the missions for which it will be employed. In fact, through this future launcher, Europeans will have to accomplish two objectives: increase their competitiveness to a more pronounced extent than with Ariane 4, and extend this competitiveness to applications in low earth orbit.

Up to now, Europeans have, of course, sought to optimize launch systems for geosynchronous missions (communications satellites, direct TV broadcast satellites, etc.). But one must admit that present geosynchronous orbit (36,000 kilometers) capacities are clearly below expressed needs. In other words, there are still prospects of a considerable market for such launch services.

---

* CNES sponsored a most interesting symposium in January. It provided a forum for discussions on the evolution of Europe's launch systems.

Nevertheless, competitiveness will have to be extended to launchings into low orbit (200 kilometers). According to a good number of forecasts, this area of space activity could give rise to many new applications. In fact, such applications are being spurred by the American space shuttle and its new associated techniques: multiple launches, rendezvous, human intervention, etc.

It is, therefore, from such low orbit activities and through major developments in robotics and remote manipulators that space operations will be able to expand in several fields, including geosynchronous launchings, and all of this under more flexible and more economical conditions.

These trends are prompting space engineers to design future generation launch vehicles no longer as mission-optimized systems but as systems meant to attain a low orbit where the mission responsibility will then be assumed by another space system. One major question remains, however: what will man's role in space be?

Three Families

Yet on the Old Continent there is seemingly no resolve to adopt the concept of a manned shuttle to meet the needs of the period 1995-2010 (this is actually the period when the future European launch vehicle is to be used). The reason? It is felt on this side of the Atlantic that while the American shuttle is technically an altogether remarkable system that unquestionably opens the way to future developments in space activity, its concept which leads to using a manned vehicle to place automatic satellites in orbit is, however, still not truly optimized.

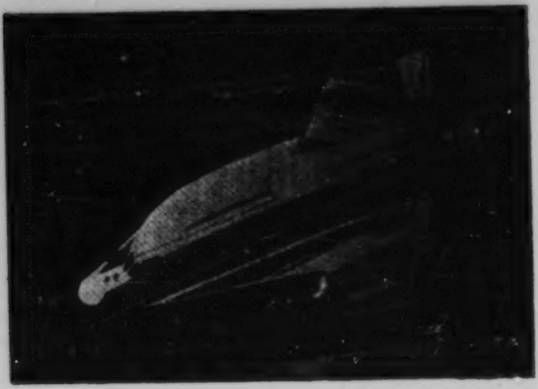
For this reason it is still necessary to examine several concepts having different degrees of recovery and partial or total reusability of the different stages. The concepts under study include the following three families: non-reusable conventional ballistic launch vehicles (Ariane 5 project being studied by Aerospatiale under a CNES contract); reusable ballistic launch vehicles (MBB [Messerschmitt-Boelkow-Blohm] is studying such systems for ESA); and recoverable aeroballistic launch vehicles (Aerospatiale is studying this family for ESA).

These three families of two-stage launchers have one thing in common: they all require a high thrust cryogenic motor. Volvo, MBB, and SEP [European Propulsion Company] are jointly studying development of a high thrust (90-100 tons) cryogenic stage designated project HM-60. But engine manufacturers are already pointing out that technological studies must begin right now if the stage is to be available by 1994. Its estimated development costs total 4 billion francs spread over a period of 10 years.

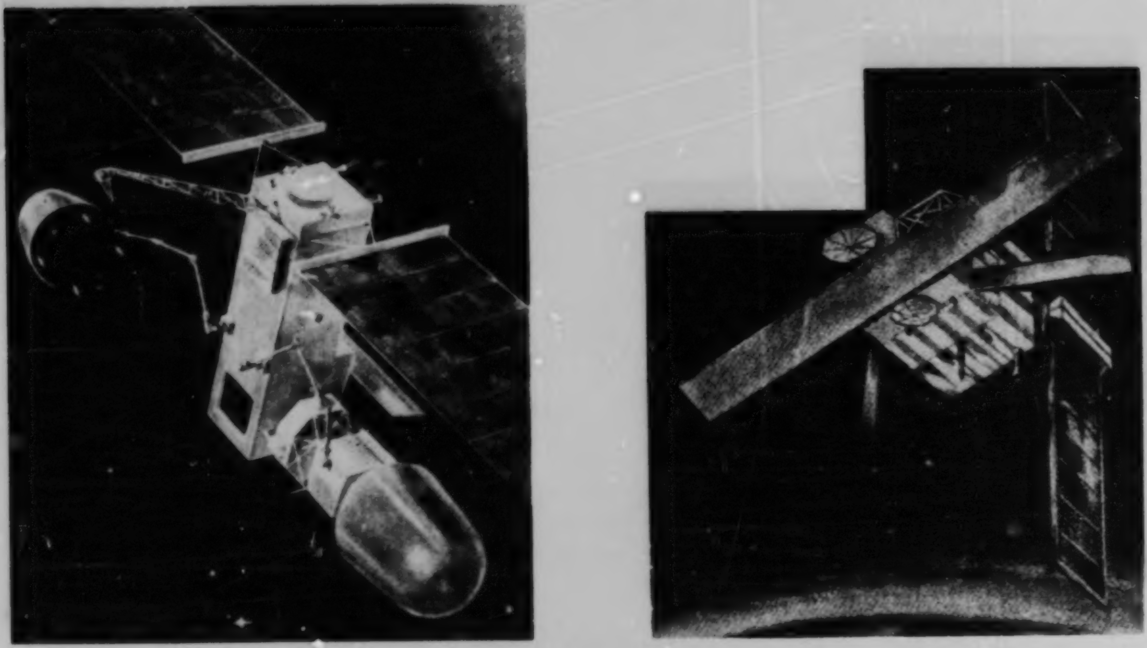
This future launch vehicle is expected to have the following principal characteristics: the same capacity (4-5 tons) of carrying payloads into geosynchronous orbit as the U.S. space shuttle, and at a lower cost; the capability of placing suitable payloads (13-15 tons) in low earth orbit; and sufficient reliability to carry manned vehicles.

But Europeans have not yet reached that point. They will be able to make headway in defining this new space transportation system and in deciding whether to develop it only after they have the data and findings from more exhaustive studies of the different concepts under consideration. The goal is to make a firm decision on this matter by 1984-1985 so as to have an operational launcher by 1993-1994.

Europeans must of necessity do their utmost in striving to adhere to this timetable. Because in addition to retaining their actual independence with respect to launch services, the stakes involved include all of the commercial "fallout" that will occur from future space applications, starting with those which exploitation of the space shuttle will generate between now and then.



Artist's conception of the Hermes manned vehicle, a project being studied by CNES for possible future use in conducting different missions in low earth orbit.



Artist's conception of the Solaris earth-orbiting space station system also being studied by CNES. This space station concept is expected to demonstrate that by using unmanned spacecraft and an Ariane 4 type of conventional nonrecoverable launcher, it is possible to conduct ambitious and industrial orbital operations such as materials processing, earth observation, and assembly of large orbital structures.

Artist's conception of another ESA project, the first European observation satellite, ERS-1 (Earth Resources Satellite). Its primary mission: monitoring oceans and glacial areas. ESA had planned to make a decision on this program in February. Estimated cost of this satellite, whose launch is targeted for mid-1987, is 2.7 billion francs. ERS-1 will be equipped with optical and ultrahigh-frequency instrumentation giving it an all-weather capability. ESA was also expected to make a decision in February on the improved version of Spacelab that could fly in 1986. The first version of Spacelab is scheduled to fly in 1983.

8041
CSO: 5500/2161

RESEARCH CENTER DEVELOPS TERMINAL INTEGRATION SYSTEM

Paris REVUE FRANCAISE DES TELECOMMUNICATIONS in French Jan 82 pp 59-61

[Article by Michel Jarlaud and Eliane Monmaur: "COMCET--Toward Electronic Mail Service"]

> [Excerpts] The union of data processing with telecommunications has given rise to new systems and services like teletex, videotex, telefacsimile, electronic mail. The incompatibility of terminals with each other hinders message routing. In order to solve this problem, the National Center for Telecommunications Research has developed a mockup of a message switchboard for electronic mail and telefacsimile (COMCET).

A New Terminal

Before ending up with the design of a mockup of a message switchboard for electronic mail and telefacsimile, called COMCET, it was essential to establish a concept of message service and the quality needed by that service. In a second stage, it was necessary to determine the transmission networks capable of being used and the desirable "interoperations." Next, it was necessary to select terminals suitable for the service, to define the techniques brought into play and to establish the specifications. Finally, a minimum of experimentation should be performed, in order to be able to validate the various technical options on the one hand and to study the structural and human impacts of this new service on the other hand.

At the present time, there is a great diversity of terminals that can have access to electronic mail. Their different access capabilities must be taken into account.

In fact, depending on the equipment, transmission is more or less fast. Telex terminals operate at 50 bauds. Text-processing terminals connected in asynchronous mode and traditional alphanumeric terminals of the teletypewriter type and display consoles usually have speeds ranging from 300 to 1,200 bits a second; in synchronous mode, speeds from 1,200 to 4,800 bits a second (2,400 for the teletex terminal). Telefacimile terminals handle 3 to 4,800 bits a second. The TGD [expansion unknown] handles 2,400 bits a second.

Therefore, the role of the switchboard is to ensure interoperation between all those terminals and to perform code conversions and adaptations to the editing features of the receiver. In addition, it must make access to the electronic mail service possible by means of the various networks, in order for its development to be important. From this point of view, it must, therefore, be able to connect the existing networks like telex, switched telephone and Transpac by offering conversions of transmission procedures and speed adaptation.

The message terminal for electronic mail and telefacsimile proposes three kinds of service: distribution services, services offered on arrival and electronic message bank services.

Distribution Service

The distribution service will offer users the function of distribution of one or more messages to one or more addressees (figure 1). The subscriber furnishes a list of correspondents and a series of messages addressed to all these correspondents. This service will be characterized by the quality of service offered at the degree of speed of execution--urgent, routine, deferred, night--and distribution reliability.

The subscriber can ask the service to verify in real time the existence of his correspondents as subscribers to electronic mail. If this is not the case, he is notified immediately and he can then modify the list of correspondents. If he has not requested verification, only the consistency of the numbers is checked.

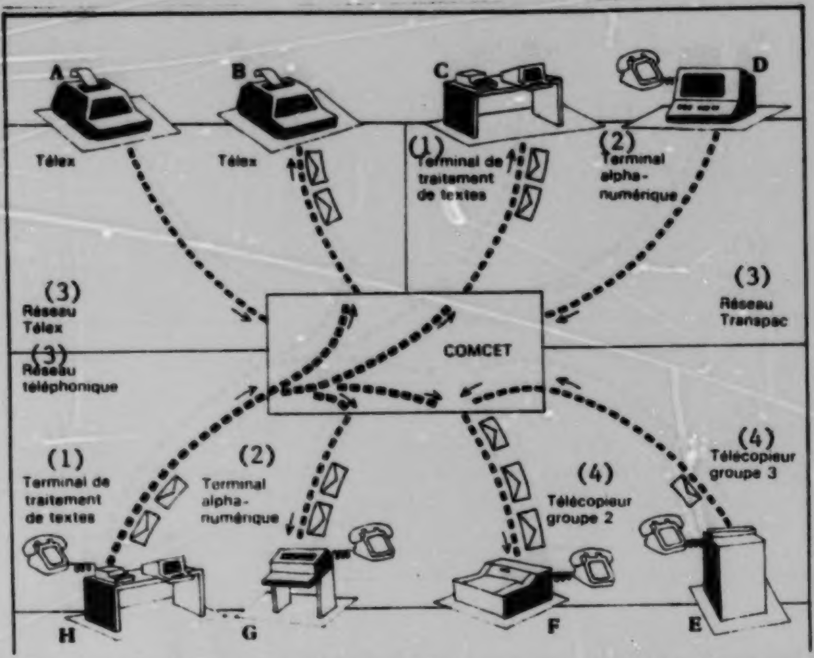
With the verification option, the service will distribute the messages regardless, even by mail if the connection has become impossible. With this option, it may happen that some numbers, although consistent, are not for a subscriber to the transmission network involved or not having electronic mail equipment. In this case, the sender will not be informed of the loss of the message, unless he has requested a reception receipt. For each message he will then be sent a receipt showing the time of delivery to each correspondent or a notation of abandonment of distribution for a correspondent.

In addition, facilities are proposed to the sending user who is assisted in addressing the recipients. The switchboard handles prerecorded distribution lists peculiar to the user.

The services offered on arrival will facilitate "users" arrival" mail handling (figure 2). A subscriber can request filing of his "arrived" mail. Any message addressed to him is then delivered normally and is also stored. This service will make it possible to obtain another example of the document at any time, either for mere duplication, or if the original has been destroyed owing to bad handling by the recipient.

A user can state that he will be absent up to certain date. Mail addressed to him is, at his choice, either sent to another user, or filed, or forwarded by the postal services, or abandoned.

For these services, the filing function is associated with the notion of message boxes managed by the service and exclusive for the user.


A
Télex
B
Télex
C
(1)
Terminal de traitement de textes
D
(2)
Terminal alpha-numérique
(3)
Réseau Télex
(3)
Réseau Transpac
COMCET
(3)
Réseau téléphonique
(1)
Terminal de traitement de textes
(2)
Terminal alpha-numérique
(4)
Télécopieur groupe 2
(4)
Télécopieur groupe 3
H
G
F
E

Distribution service: The distribution service handles forwarding of one or more messages to one or more subscribers. The quality of the service is determined by the sender who selects the forwarding speed (urgent, routine, deferred), reliability of forwarding (reception receipt, verification of the existence of the recipients). Addressing facilities are offered in the form of predetermined lists.

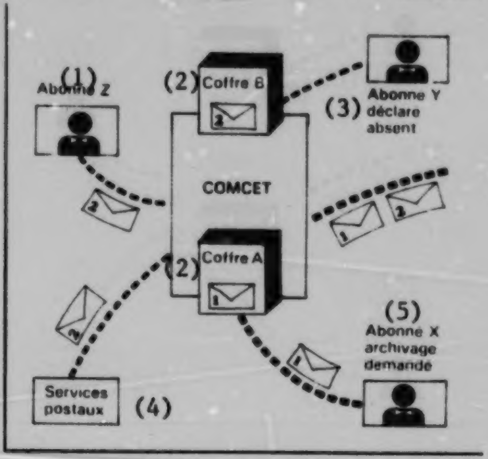
Two distribution examples are given here: distribution of two messages from subscriber H to subscribers B, C, F, G and distribution of a message from subscriber E to subscriber F.

Key:

1. text processing terminal
2. alphanumeric terminal
3. telex, Transpac , telephone network
4. telefacsimile group 2, 3

Electronic Message Bank Service

This electronic message bank will offer personal letter box services, data exchange, general data and teleconference. Thus, any user will be able to deposit messages in a box, but only its owner will be able to consult them and destroy them. In case of exchange, each subscriber will have the capability of depositing and consulting the messages that the box contains. With regard to general data, anyone will examine that those data, but only a subscriber can deposit and eliminate information. This service will make it possible, for example, to handle service memoranda, yearbooks, test patterns for terminals. Finally, by means of teleconference, a group of users will exchange messages in deferred time on a given subject. Only the members of the group can participate in a specific teleconference, because deposit and consultation of the pertinent messages is protected.



Services offered on arrival: Filing and absent subscriber. In the first case, subscriber X requests COMCET to file his mail on receipt. The message addressed to him (message 1) is distributed normally and is also stored in the box of his choice (Box A here).

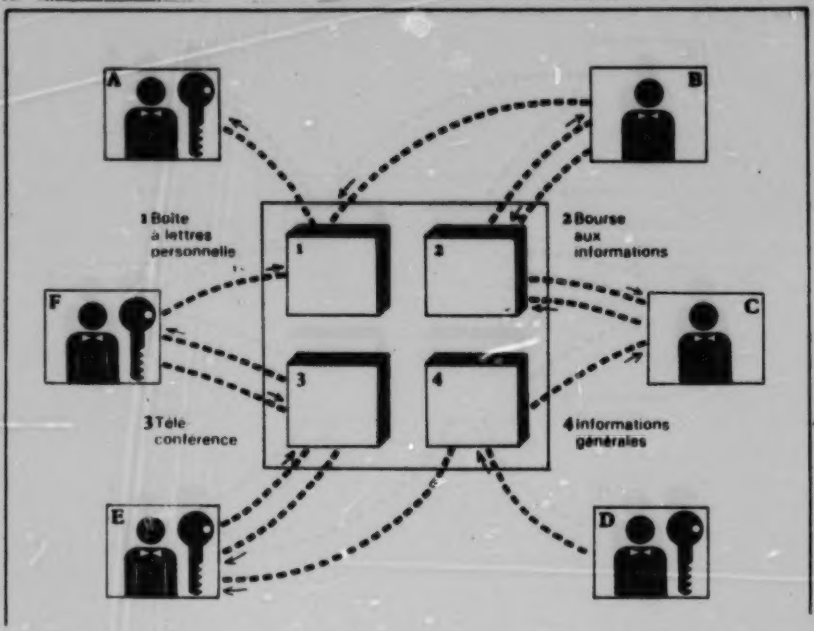
In the second case, subscriber Y states that he will be absent up to a certain date and orders that any message addressed to him (message 2) be stored in the box of his choice (Box B). He might have requested that this message be sent to subscriber Z, or forwarded by the postal services.

Key:

1. subscriber Z
2. Box B, Box A
3. subscriber Y states his absence
4. postal services
5. subscriber X requests filing

This electronic message bank, therefore, consists of boxes to which the users will have access (figure 3). Subscibers will have the right to own one or more.

A message addressed to a box will include, in addition to its heading, a title and a validity date. The title is supplied by the sender and is limited in number of characters. It appears in the dictionary of the box and makes it possible to seek out the message. The duration of validity, initiated by the sender, can be modifed subsequently. On expiration of that time period, the message will be destroyed by the service. When a message is inserted in a box, the service will assign it a number that makes it possible to index it.



Electronic message bank service: Personal letter boxes, teleconference, data exchange, general data.

Subscriber A has one (or more) personal boxes. He alone can consult the messages deposited by any subscriber. Any subscriber can deposit messages in "data exchange" box, or can consult them (small notices).

A "teleconference" box is accessible to any subscriber on the list associated with that box (here, subscribers E and F) for depositing and consulting messages.

Subscriber D handles a "general data" box. He alone can deposit messages in it that can be consulted by any subscriber (service memoranda, yearbooks).

Key: 1. personal letter box
2. data exchange
3. teleconference
4. general data

Several kinds of operations are possible in a box. The operation of deposit enabling the user to insert one or more messages; the dictionary consultation operation in which the list of messages referred to by a number is obtained; the operation of requesting a message: it is possible to obtain either all the messages contained in the box, or one particular message selected by its number. Finally, an operation of validation consisting in modifying the duration of validation of a message.

An access key goes with each kind of operation determining the degree of confidentiality of the messages. Three kinds of access are possible: pooled, any subscriber can perform the operation involved on this box; selective, the operation is authorized only for a certain number of subscribers whose list is associated with the box; access by password.

All the operations and their access keys make it possible to set up flexible, varied data systems, without, however, reaching the complexity of a data bank.

Access to the Service

After establishment of communication with the electronic mail service (specific establishment to the network used), the procedures for service selection, for deposit of messages, for addressing the recipients and for access to the boxes are performed in accordance with two operating modes.

In the dialogue mode (and in real time), the subscriber is guided during performance of the service by questions that he must answer, in order to introduce the service parameters, within a period of several minutes. If the answers are incorrect, the service asks the questions again, or asks for corrections. The subscriber can cancel his answer or request repetition of the previous question.

In automatic mode, all the communication parameters are sent by the subscriber at one time. This mode of operation is especially convenient in case of the distribution service requiring no answer by the electronic mail service.

In the case of services requiring an answer (consultation of a box, for example), the answer will be deferred. The subscriber will be recalled as soon as the service is able to provide him with the requested data.

Any message distributed is authenticated by a heading generated by the service, consisting of origin, addressee, time of filing and time of transmission.

The services described above exclude direct communications between subscribers. The asynchronism existing between the functions of filing and transmission (or consultation) of messages requires them to be stored. Only the method of message switching, which disassociates these operations, makes it possible to perform the desired functions.

The COMCET electronic mail service, therefore, uses this method. A multi-switching structure, with the terminals connected to each other by high-rate connections through the Transpac network, might make it possible to ensure good coverage of the territory by dividing up the traffic and by offering a high degree of reliability.

Because messages are recorded before being delivered, it is possible to receive them and then to transmit them with procedures for transportation, speeds, period, presentation and different codes.

This makes it possible to provide maximum compatibility between the various kinds of terminals and interoperation between the various transmission networks.

Switching, Performance of the System

In order to become familiar with the capabilities of the COMCET system, a simulation has been produced in accordance with several assumptions.

First of all, it was essential to achieve a good quality for the service, that is to say a low rate of rejection of calls, a short delay between filing and transmission of the message. For example, it was desirable for a message transmitted in the morning to be distributed before 1400 hours. An overall acceptable result is an 80-percent distribution of messages performed in less than 2 hours.

Next, the entering traffic was divided into two periods (0800 hours 1200 hours and 1400 hours 1800 hours) with two peaks at 1030 hours and 1530 hours, and, depending on the terminals, 30 percent for 50 to 300 bits a second, 60 percent for 1,200 bits a second, 10 percent for telefacsimile. Because the rule on distribution of outgoing calls is the same as for entering calls, the size of the messages was modulated in accordance with the transmitter: telex, 250 to 750 characters; telephone terminal, 1,000 to 2,000 characters; telefacsimile, 20,000 to 40,000 characters. Finally, the average distribution rate was 5.6 [percent] and the average terminal no answer or busy was estimated at 10 percent.

The results of this simulation were very acceptable. In fact, with 5,000 messages a day entering, therefore 28,000 outgoing, and a maximum configuration of the computer, no call was refused, the system did not rest between 1300 hours and 1400 hours and 90 percent of the messages waiting less than 2 hours.

The message switchboard for electronic mail and telefacsimile is included in the framework of the new communication services to be offered to enterprises. It is one of the first steps toward an integrated system of document communication.

Progress in this direction requires a continuation of the efforts made with regard to standardizing the services within international agencies (CCITT [International Telegraph and Telephone Consultative Committee (of ITU)], CEPT [European Conference on Postal and Telecommunications Administration], ISO [International Standardization Organization]). In this context, the COMCET mockup was an ideal test bench for the French telecommunications administration, in order to contribute to the specification of services, procedures and validation of technical options. The success of this project was made concrete by demonstration, especially at the time of the last AFCET-SICOB [expansion unknown] bureaucratic exhibition and it made it possible to ascertain the feasibility of this application.

10,042
CSO: 5500/2144

GOVERNMENT NOTE ON SATELLITE, SPACE ACTIVITIES

Amsterdam ELSEVIERS WEEKBLAD in Dutch 13 Mar 82 p 11

[Article by Fred Kappetijn]

[Text] One of these days, after 5 years, the note on satellite and space activities will finally appear. The essence of the note is that the Netherlands, in the area of satellite and space activities, will have to keep a somewhat lower profile. For the time being, no new national (scientific) satellite, though somewhat more activity in the European context. According to the government, industry has nobody but itself to blame for the fact that the Netherlands will not develop into a leading satellite and space activities nation.

In 1977, the government promised our representatives in Parliament that it would prepare a note on satellite and space activities. Twelve months ago, the content of that note was almost ready, with the exception of a few points of detail. One point of detail was: Who must provide how much money for the implementation of the proposed satellite and space activities program. After some bickering, the Ministers of Economic Affairs and Science Policy, with the help of their colleague in the Ministry of Finance, had resolved this problem.

A stubborn problem was: Who would have the responsibility of what? That is called competence. During and after the last cabinet formation, this problem became blown up because the question of competence came to stand in the sharp, and up to the present, paralyzing light of the discussion on the so-called office of project minister. The question who that would now have to be in the area of satellite and space activities is the subject of a struggle between Minister Van Kemenade (Education and Science), who finds that research in the area of satellite and space activities is a question of more than technology for the sake of industrial development, and Terlouw (Economic Affairs), who would like very much to pursue some kind of technology policy. In circles in The Hague, it is being muttered that the bickering is almost over.

Unless the indications are deceptive, the note on satellite and space activities will thus be made public within a short time. The word public should, indeed, be put in quotation marks since everybody involved already knows its content. Already last summer, the Cabinet agreed to the content of the note. The note contains, among other things, the following points:

- An annual government expenditure of approximately 100 million guilder. That is approximately the same amount as the government, on the average, has spent on satellite and space activities during the last few years.

- For the time being, no new national (scientific) satellite as a successor to the Astronomical Dutch Satellite (the ANS) and the Infrared Astronomical Satellite (the IRAS). The latter will probably be put in orbit around the earth at the end of this year or the beginning of the following year.

- Greater efforts in a European context through more participation in projects of the European Space Agency (the ESA).

0.04 Percent

The 0.04 percent of the gross national product which the Dutch government spends on satellite and space activities is less than the average of the West European countries, which is 0.05 percent. A perhaps more important difference with our neighboring countries is that, in the implementation of the government policy as reported in the note on satellite and space activities, the ratio between national and European projects is different.

N. de Boer, an economist of the Dutch Institute of Aircraft Development and Satellite and Space Activities (the NIVR) at Delft, says on this: "The Dutch government wants an increase in the share in the European Space Agency projects, and thus fewer or even, for the time being, no new national projects. You notice, however, that the other countries which are members of the European Space Agency endeavor to achieve the opposite, viz. a ratio of one to one, thus just as much money for European Space Agency projects as for national projects. It is true that you have to take a broad view of the word 'national.' It is mostly a question of bilateral or trilateral projects. That applies also to our national satellite projects, the ANS and, in particular, to the IRAS. The Netherlands do not, for example, have launching facilities, so that we are dependent on the United States for the launching of the IRAS."

The government is no longer as interested in building national satellites, particularly not for scientific purposes, and even not if they have a certain commercial interest.

The Scientific Policy Advisory Council (the RAWB) wrote in June of 1980 that commercialization of the satellite and space activities will become a fact in the eighties, and that the financial efforts on the part of the government, therefore, may become limited. The RAWB thus did not at all consider a third national scientific satellite project. Thus, after the ANS (57 million guilder) and the IRAS (150 million guilder), no TIXTE (Timing Imaging X-Ray Transient Explorer). That is the scientific satellite which would have had to discover and examine X-ray sources in the sky. A project in which the laboratories for space research in Leiden and Utrecht were extremely interested, and for which a feasibility study had already been performed in 1980.

A course of events which Professor H. Wittenberg, engineer, of the Department of Aviation and Satellite and Space Activities Technology of the Technical University at Delft, finds incomprehensible: "The RAWB and the government reject such a scientific satellite project while, in the very area of astronomy and astrophysics, our country has the greatest scientific and technical potential."

Declining

The fact that the Ministry of Economic Affairs has a somewhat different view of matters such as these is not so strange. J. W. Hillege, engineer, deputy director-general of industry of the Ministry of Economic Affairs, does not find it very significant to build another scientific satellite. "The learning curve of the industry is declining. The role of the authorities is to render assistance in the advance investment of knowledge, to lend a hand during the steep part of the learning curve. Further, the authorities are, of course, also customers. There thus is and will, of course, be the use by the authorities (the Postal and Telecommunications Services, and the Dutch broadcasting stations) of satellites for telecommunication and broadcasting. If, however, no industry offers to build this kind of satellite in the Netherlands, the authorities will not participate any longer either." This statement asks for further elucidation of the role of Philips and its subsidiary Hollandse Signaal Apparaten, which is normally referred to as Signaal. However, Hillege does not want to make any further statements on Philips and satellite and space activities. That is a pity, for in the note is implied a reproach with reference to Philips that developments in the field of satellite communications have not really picked up. While Philips, however, has everything ready, and, in the communications market, is very active.

Too Far

Dr. P. A. J. Tindemans, head of the Department of Industrial Research of the Ministry of Education and Science, says on this subject: "Philips is much less involved in the satellite and space activities sector than Fokker, for all sorts of reasons, which, of course, reflect Philip's interests. It is not reasonable either to expect that Signaal, all of a sudden, would set up a satellite line. That would go too far. But it is a well-known fact that not everybody at Philips attaches equally great importance to satellite and space activities."

In the note on satellite and space activities, satellite telecommunication is mentioned as the most obvious example of the coming commercialization of the satellite and space activities. Tindemans: "It is a real industrial possibility, and one might assume that a big enterprise such as Philips which, in a number of areas in the telecommunications sector, holds a strong position, might become active in the entire sector. It might be able to offer a total package, varying from receiving and sender systems for the satellite to reception parabolas for ground stations."

Parts

According to Tindemans, Philips is still not in favor of that and chooses to develop and supply a few parts in areas where it has a strong position. "If, indeed, Philips should choose to deliver entire systems, it would be considerably easier for the authorities to pursue a sharply focused policy in this area," Tindemans says. "Now things are somewhat more difficult. The reason why we, as public authorities, keep putting money into this area is that we see an industrial perspective in it. A greater contribution from the industry ought then to become slowly visible."

The fact that the Dutch authorities do, indeed, see a future in the field of satellite communications appears from the decision taken by the council of ministers prior to the note on satellite and space activities at the end of last year on the Dutch participation in the Large Satellite program of the European Space Agency. The Large Satellite is an example to demonstrate a new generation of telecommunication satellites. If in 1986 the satellite, with the European Ariane carrier rocket, is brought to its final destination at 36,000 kilometers above the equator, the Netherlands will have contributed approximately 135 million guilder to the costs, i.e. 11-12 percent of the total costs. The Dutch partners are the United Kingdom, Italy, Canada, Belgium, Denmark, Spain, and Austria. According to Minister Terlouw, the development and the construction of the Large Satellite provides Fokker and Hollandse Signaal Apparaten with 600 men years.

Busy

The absence of France and the Federal Republic of Germany in the European satellite program is striking, and significant. De Boer of the Dutch Institute for Aviation Development and Satellite and Space Activities: "In 1977 the idea was still that France and the Federal Republic of Germany would participate in the projects of the European Space Agency, and that they would take by far the greatest share in these projects. However, under pressure from their industries, which wanted an even greater share in the projects, both countries decided to build a broadcasting satellite together."

The original ideal of the European Space Agency, joint European cooperation in the area of satellite and space activities, is being threatened by the increasing possibilities of making money in this sector. It is thus expected that, in the period 1985-2000, there will be a need for approximately 150 to 200 large satellites of the Large Satellite type. The European Space Agency does not tolerate any commercialization of the satellite and space activities, and the smaller countries, such as the Netherlands, are in danger of becoming the victims of this, seeing that they alone cannot carry out any large projects and, in the market determined by politics, cannot make it on the basis of their very small, or even lacking, domestic markets. The small countries may, indeed, contribute to the development costs in the European Space Agency context, thereby distributing the initial risks, but if it becomes economically interesting, the large countries say that they prefer to do it themselves.

De Boer: "That is why we have now had included in the Large Satellite contract that, in the case of any subsequent orders, we shall still participate with the same percentage."

Reduced Level

In addition to the imminent danger of a quantitatively reduced level of the Dutch satellite and space activities, there is also the imminent danger of a reduction in quality. Wittenberg: "I doubt if it will be possible for the Netherlands in the future on the basis of the intended concentration (70 percent of the public expenditure) on ESA, and without a strong national program in respect of our own projects, to remain the same interesting partner within the ESA. There is the imminent danger that the fair return will increasingly apply to technoscientific work of a lower level." De Boer: "You are allowed to participate in the talks within the ESA if you contribute money and technology. The latter you can only develop through national programs. Other countries do that too."

Finally Wittenberg: "If our country fails to invest to a sufficient degree in national and international satellite and space activities programs, and it is decided, in the future, to concentrate solely on ESA as the chief objective, our country will, no doubt, gradually lose the position it has acquired in the area of space research and space technology."

7262
CSO: 5500/2169

NETHERLANDS

NEW PUBLIC COMPUTER COMMUNICATIONS NETWORK

Amsterdam DE TELEGRAAF in Dutch 5 Mar 82 p 29

> [Text] The Netherlands has as of today a public computer communications network. This network has been set up specially by the Postal and Telecommunications Services to effect fast and practical communication among different kinds of computers.

At a meeting in The Hague, Parliamentary Undersecretary for Transport and Waterways, J. van der Doef, opened the public computer communications network I of the Postal and Telecommunications Services.

According to him, a qualitatively excellent and flexible "network for communication among computers" will hereby become available to industry. The parliamentary undersecretary, moreover, stressed the international nature of the public computer communications network I. The idea is that all public computer communications networks in Europe will, before long, become interconnected.

The computer communications network is a logical successor to the telephone and the telex systems. "Also users with a relatively small need for communication will now get the possibility, at an early stage, of having the disposal of an extended network. C. Wit, engineer, chief director of the Telecommunications Department of the Postal and Telecommunications Services, envisages, in the future, a coupling among all kinds of networks, for example, from video-phones at subscribers starting in the telephone network and, subsequently, via the computer communications network to a computer; or telex communication, via telex as well as via computer communications networks.

The Postal and Telecommunications Services expect, in the course of the next 2 years, to connect 5,000 terminals to the new public computer communications network. In order to achieve the highest possible level of good and reliable communication, a technique has been chosen according to which the information is split into equal packages. In special exchanges, these are held briefly, sorted out, and then sent on to their destinations, as if it were a question of freight cars. This goes so quickly that it seems as if the subscribers are in uninterrupted contact with one another. An important feature is the absence of disturbances. When computers are connected with one another via telephone lines, the chance of disturbances is great. Telephone lines were, after all, not developed for this.

Also the tariffs are based on the number of information packages. Duration and distance, as in the case of telephone tariffs, are not important.

According to A. O. Schaap, engineer, director of ITT Standard Electric, the Postal and Telecommunications Services now have at their disposal the most modern network in the world. The techniques involved have been developed in close cooperation with the Postal and Telecommunications Services and a Belgian ITT enterprise in the Netherlands. A. O. Schaap talked about a unique development. "Technically, this is just as difficult as the development of a new large computer. This is an indication that the telecommunications industry in the Benelux countries can handle even the most advanced projects," A. O. Schaap said.

The computer communications network is composed of sixty satellite exchanges and three communications exchanges. These exchanges--and thus the intelligence of the network--are spread throughout the country. According to A. O. Schaap, the latest inventions in the technical area have been incorporated into this computer communications network. The present set-up offers sufficient capacity for 20,000 subscribers. Expansion of this capacity is easy since the system is very flexible. At the Postal and Telecommunications Services it is thus stated with pride: the computer communications network I now really puts life into the computer.

7262
CSO: 5500/2166

EXPERIMENTAL TWO-WAY CABLE TV PLANNED IN LIMBURG

Rotterdam NRC HANDELSBLAD in Dutch 16 Mar 82 p 2

> [Text] The government allows Limburg to experiment with new services in connection with a two-way cable TV network but, for the time being, not with paid television. The cabinet decided last week to support the Limburg experiment with approximately 10 million guilder.

It is a question of a two-way cable TV network which will be built in Maastricht, Heerlen, Kerkrade, Sittard, Valkenburg and Beek, with a total of 90,000 connections. "By far the biggest two-way cable TV experiment in the world," F. Rondagh, economist, the information policy man of Minister J. Terlouw of the Ministry of Economic Affairs, establishes. Philips will next month start on the construction of the network in Maastricht.

All kinds of tests with vacancy banks, freight data, hotel bookings, and tele-text information can be performed on the Limburg cable network. A particular feature is that the viewer can also call up information via his set, something which till now could only be done via telephone (for example, video telephone). At an advanced state, a viewer may also via his set pass on an opinion such as yes or no to the exchange.

Minister Andre van der Louw (Cultural, Recreational, and Social Affairs) has, till the end, strongly opposed broadcasting experiments on the Limburg network. He has insisted that for such experiments, a new cabinet decision is necessary. Van der Louw wants to base his broadcasting policy on a new media note which he will not submit to Parliament until the summer. Before that time, he rejects experiments with, for example, paid TV, a special channel with films, shows, etc. to which the viewer may subscribe specially.

The fact that the cabinet decision, nevertheless, was made may be seen as a victory to Minister J. Terlouw, who sees the new services as a potential source of employment and export. Rondagh: "A big experiment such as the one in Limburg gives all kinds of new developments and products which may be used elsewhere."

Philips, which is building the network in Limburg, does not have the disposal of the selector matrices which, as small telephone exchanges, can select and send on the different orders from viewer to supplier. Deltakabel at Gouda and Robert Schmitz at Zaltbommel have developed such equipment. The Postal and Telecommunications Services still have to decide which one may be used in the Dutch network.

The South-Dutch municipality of Puttershoek has asked the Ministry of Economic Affairs to finance three experiments on the local cable TV network. It is a question of alarm systems for senior citizens, burglary and fire alarm systems. These are just simple services which may also be provided by the Postal and Telecommunications Services via a telephone line. The ministry will examine whether these experiments are sufficiently innovative to warrant subsidization.

7262
CSO: 5500/2166

BRIEFS

AGENCY TO START POSTFAX SERVICE--"During the second half of this year the Telecommunications Administration and the Post Office will jointly introduce a new communications service called Postfax. It is a service intended for people who might have a need for sending or receiving facsimiles but do not themselves have the necessary equipment. It involves a two-year test period in order to clarify the demand. For the time being the service will only be offered inside the country. Later on it may be of interest to offer communication also between Norway and other countries," information manager Christian Bugge Hjorth in the Telecommunications Administration informs AFTENPOSTEN. The Post Office intends to establish Postfax service offices at a few places in Oslo and in Bergen, Trondheim, Gjovik, Skien, Kristiansand, Kristiansund, Narvik and Tromso. The Telecommunications Administration plans service offices in Oslo, Bergen, Trondheim, Hamar, Drammen, Stavanger, Alesund, Bodo, Harstad, Hammerfest, and Vadso. The public will be able to deliver documents to be transmitted at a service office and have them transmitted in facsimile to the service office located closest to the addressee. Persons who themselves have equipment will be able to send facsimiles to the service office located closest to the addressee and get them delivered further from that office. It is the Post Office's express service which will be responsible for the delivery. A third possibility is that the addressee himself will pick up the facsimiles at the service office. "So far no decision has been made on the rates for this service. This is a question which the Post Office and the Telecommunications Administration will discuss further," says Bugge Hjorth. [Text] [Oslo AFTENPOSTEN in Norwegian 23 Mar 82 p 35] 8958

CSO: 5500/2170

END

JPRS 80783

11 May 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 216

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 80783

11 May 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 216

CONTENTS

ASIA

AUSTRALIA

Domestic Satellite Plans Reviewed
(THE AUSTRALIAN, 15 Mar 82) 1

New EMS Net Includes Teletype, Telex Systems
(Douglas Moore; THE AUSTRALIAN, 9 Mar 82) 3

Advance Executive Claims Local Capital Exists for Technology
(Nicholas Rothwell; THE AUSTRALIAN, 9 Mar 82) 4

Briefs

Resources Computer Committee 6

INDIA

Conflicting Recommendations on News Agencies Reported
(THE STATESMAN, 1 Apr 82) 7

Briefs

TV Relay 8
News Agency Exchange 8
Radio Services 8
8

INDONESIA

Briefs

New Palapa Satellites 9

MONGOLIA

Briefs

Television Station 10

NEPAL

Briefs
Microwave Trunk Service 11

PAKISTAN

Briefs
Telecommunications Project 12

PEOPLE'S REPUBLIC OF CHINA

Briefs
Anshan TV Tower 13

PHILIPPINES

More Phones For Rural Areas
(PHILIPPINES DAILY EXPRESS, 14 Apr 82) 14

Funds For Visayas Telecommunications
(PHILIPPINES DAILY EXPRESS, 16 Apr 82) 15

SOUTH KOREA

Government Ready To Exchange Mail
(THE KOREA HERALD, 22 Apr 82) 16

VIETNAM

Briefs
Ben Tre Wired Radio Stations 19
Telephone Link With Moscow 19

LATIN AMERICA

COSTA RICA

Briefs
New Radio Station 20

CUBA

U.S. Policy On 'Radio Marti' Criticized
(Victorio M. Copa; PRISMA LATINOAMERICANO, Feb 82) 21

U.S. Trying To 'Control Communications Media'
(Carlos Mora Herman; VERDE OLIVO, 11 Mar 82) 24

NEAR EAST AND NORTH AFRICA

OMAN

Briefs
New Telephone Lines 27

QATAR

Briefs
Satellite Station Contract 28

SUB-SAHARA AFRICA

DJIBOUTI

New Solar-Powered Microwave Relay Opened
(LA NATION, 4 May 82) 29

SEYCHELLES

Briefs
TV Equipment Purchase 31

SOUTH AFRICA

Success of Radio Balloon Experiment Reported
(THE CITIZEN, 17 Apr 82) 32

ZIMBABWE

Briefs
Railways Install Microwave 33

USSR

USSR

'PRAVDA' Reports on International Television Cooperation
(TASS, 11 Apr 82) 34

Report On New Satellite Sea Rescue System
(A. Gorokhov; PRAVDA, 14 Apr 82) 35

Intervision Television Developments Discussed
(L. Chausov; PRAVDA, 12 Apr 82) 37

Briefs
Satellite Station Completed 40
New Television Station 40

WEST EUROPE

INTERNATIONAL AFFAIRS

Briefs
Iceland To Join Nordsat 41

DENMARK

Paper Faults Government's Teledata Feasibility Trial (Editorial; BERLINGSKE TIDENDE, 6 Apr 82) 42

FINLAND

First Satellite-TV Transmission To Finland Reported (UUSI SUOMI, 27 Mar 82) 43

GREECE

Briefs
Cyprus Telecommunications Link 45

AUSTRALIA

DOMESTIC SATELLITE PLANS REVIEWED

BK101316 Sydney THE AUSTRALIAN in English 15 Mar 82 p 18

[Excerpt] Details of contracts to supply the hardware and software for the domestic communications satellite are expected to be announced shortly by the federal government.

The contracts are estimated to be worth upwards of $100 million in the long term.

The communications satellite--Aussat--is regarded as the most significant contract for the local electronics industry in years.

The federal government has indicated that there will be the highest degree possible of local participation in the program--ranging from manufacturing and support for the ground segment, through to space tracking and the provision of sophisticated electronic hardware for the space segment.

The first Australian satellite is scheduled to be launched in 1985. Basically, the system has been designed to improve the existing communications network, provide TV and radio services to the outback, increase the capacity for bulk high speed business communications, enable improved health care and communication to remote locations and improve meteorological and scientific data transfer facilities.

The satellite will be positioned 36,000 km, above the Pacific Ocean near Nauru, enabling it to act as a communication relay station between two or more points of its coverage area of Australia and Papua New Guinea.

Each solar-powered satellite will have 15 transponders which receive a weak signal from earth and retransmit the amplified signal back to earth in another frequency.

The transponders will be able to handle one television program and up to three radio programs each. They also have the capacity to handle up to 1,000 voice channels or 50 million "bits" of information a second.

Initially the system will provide a national beam covering the whole country and an additional four, more powerful, spot beams. Three will cover western Australia, south Australia, the northern territory and Queensland. The fourth will cover NSW, Victoria and Tasmania.

A fifth 'spot' beam will serve Papua New Guinea.

Telecom will use the satellite to improve ISD and STD [subscriber trunk dialing] services to areas not currently services by its ground microwave system. The system will also be used to provide extra trunk capacity and for emergency services.

But the service likely to have the most impact, particularly in the outback areas, will be HACBSS--the Homestead and Community Broadcasting Satellite Service.

Initially the service will provide one ABC [Australian Broadcasting Commission] TV channel and up to three ABC radio channels. It will also have the capacity to provide a second commercial channel and radio service. Programs will be transmitted to the satellite from major earth stations in all capital cities except Melbourne.

CSO: 5500/2219

NEW EMS NET INCLUDES TELETYPE, TELEX SYSTEMS

Canberra THE AUSTRALIAN in English 9 Mar 82 p 19

[Article by Douglas Moore]

[Text] DATAPOINT Corp has released an enhanced Electronic Message System network controller, which extends the EMS range for IEOS (Integrated Electronic Office System) users to Teletype stations and telex networks.

"Now any EMS user at any Datapoint work station can have transparent access to telex and Teletype," a company spokesman said.

Datapoint's EMS provides a fast, easy means of transmitting messages, documents or text files from one address to another electronically.

Additionally, the network controller could operate independently from IEOS, letting telex and Teletype users communicate with each other using the same protocol conversion, automatic routeing, delivery to multiple addresses, and management reporting capabilities inherent in the IEOS-based operation, he said.

"The turnkey network controller can support from one to 1000 addresses (mailstops).

"Transmission speeds range from 50 to 4800 bits per second."

The network controller can be customised to suit a variety of customer applications.

The minimum configuration requires one Datapoint 6000 series processor with 128K bytes of memory, a disc storage device and a local printer.

Disc storage is needed for terminal control, message distribution, traffic routeing, path selection, format conversion and transmission cost assignment.

Upon receiving mail for routeing to a particular mailstop, the network controller checks database information for routeing conditions.

"Through automatic protocol conversion, which is transparent to the user, a message which originates at a Teletype machine destined for a telex mailstop is automatically converted at time of delivery to the telex format, as Teletype and telex character sets are not compatible.

"The same holds for communication to and from local and remote Datapoint integrated electronic office work stations."

The automatic dialling capability of the network controller saves time for the user: "For a message that is to be delivered to a number of destinations, the operator keys it in once and simply sends it to the network controller.

"The controller automatically dials the telephone number for each receiving mailstop, redialling if necessary to make the connection and deliver the message."

The network controller also features message retrieval, which uses the mass storage message queues to obtain previously delivered sequentially numbered message traffic; auto-intercept message routeing, which deposits messages that the network contoller is unable to deliver at a user-designated mailstop; and accounting files, which uses report programs to record and analyse the flow and costs of message traffic processed by the network controller.

Datapoint has also announced the addition of message services to the word processing software which operates on Datapoint 1550 small business computers.

A spokesman said that with the new software, IEOS 1.4, a standalone Datapoint 1550 could become an Integrated Electronic Office System processor, capable of data processing, word processing and electronic message services at a single work station.

"This multi-function system starts from under $10,000."

"The IEOS software — the same software that runs on larger Datapoint processors and in an ARC (attached resource computer) local network — allows a user to compose memos, documents or other text, and prepare and send them via Electronic Message Services to other standalone systems, to processors on an ARC-local network, or to Teletype and telex addresses."

Object code, text files and data files prepared in data processing on one 1550 system could be sent to another remote location or to a central ARC network.

Conversely, documents, object code, text and data files prepared in a home office local network could be distributed via EMS to remote 1550 sites which were using the new IEOS software.

The 1550 could also be used to prepare messages for distribution to Teletype and telex addresses.

"A message prepared on the 1550 is picked up by the EMS network controller, automatically converted to the appropriate format, and distributed."

Delivery priorities and routeing instructions could be assigned to control the distribution of each message.

CSO: 5500/7531

ADVANCE EXECUTIVE CLAIMS LOCAL CAPITAL EXISTS FOR TECHNOLOGY

Canberra THE AUSTRALIAN in English 9 Mar 82 p 26

[Article by Nicholas Rothwell]

[Text]

VENTURE capital to start up high technology companies can be found in Australia, and the hearsay that financial backing is impossible to obtain has largely been established by businessmen.

This has been claimed by a top executive of one of the country's best known indigenous computer companies.

The financial director of Canberra-based Information Electronics, Mr Brian Crowley, told a recent conference on the availability of venture capital in Australia that risk capital could be found — but "no one said it was easy".

The conference on venture capital and technological innovation was called by the Australia-New Zealand Association for the Advancement of Science (ANZAAS) so that business leaders, technology experts, bankers and senior Government officials could put their views on the topic.

Venture capital funding has assumed critical importance as new industries and processes, many of which could be profitable on a small scale, come within the scope of Australian scientists and entrepreneurs.

Fields such as biotechnology have been heavily supported by American stock exchanges, but there has been widespread criticism of the Australian banking system's inability to spot and back promising local science and technology projects despite the international standing of the scientific community here.

Mr Crowley agreed that gaining access to funds was "just about the most difficult thing a businessman faces" but stressed that it was not impossible — as was proved by the history of Information Electronics.

There was a widespread acceptance that venture finance was "all but non-existent".

"I believe that in a lot of cases businessmen establish the myth themselves," he said.

"Poorly planned approaches, lack of a well thought out and documented plan, and a general lack of professionalism would account for a majority of failures for those seeking venture finance."

The simple dilemma was that banks were "not into venture finance" and businessmen knew there was little or no security in venture finance propositions.

But venture capital was available and had been attracted to Information Electronics by its founder, Mr Malcolm Macaulay, after an initial, unsuccessful attempt to win backing from brokers.

The first share listing of the company, in early 1969, was successful because of a campaign by Mr Macaulay, who had "conditioned" the financial press and the public to accept his belief that "Australia should have its own computer company".

Clever preparation of the marketplace for the first Information Electronics share flotation had been matched in four subsequent "forays into the venture capital marketplace", which had raised a cumulative total of $2.578.000.

More conventional borrowing techniques had also been used, and the remarkable performance of the company's executives in finding support was thrown into light by the fact that Information Electronics had lost money in all but two years since its foundation.

"At no time during its entire history have the funds of the shareholders of the company been preserved intact," Mr Crowley said.

The performance of the company had not been affected by lack of capital, as far more money had been raised than had ever been anticipated as a reasonable requirement.

TRANSITION

He suggested there were several contributing factors behind the poor figures recorded by Information Electronics, including the commercial failure of its first product, the University of NSW's Intergraphic Computer, made under licence.

A switch by IE to the manufacture of terminals had eventually achieved good sales, but the company nevertheless turned to the Australian Industrial Development Corporation for assistance.

AIDC had then announced that the company was "suffering from the pressures of success", and a joint enterprise between IE and AIDC resulted in two "highly profitable" years with a net profit of more than $500.000.

Eventually problems arose as it became impossible for the company to sustain "the ever-increasing requirements to produce more terminals".

"Delivery times slipped, customers became disenchanted and others fell away — IE was unable to make the transition from a small research and development production company to a relatively large-scale manufacturing company," Mr Crowley said.

In 1977 Fidelity Credit Corp purchased a major shareholding in IE for less than $15.000 total outlay.

But this produced "management by cash injection" and funds were poured in "without coming to grips with the basic problems".

Mr Crowley said that IE was now trading under a scheme of arrangement, had shown a return to profitability and was attempting to reclaim its former 40 per cent share of the terminal market.

"I believe all this demonstrates that venture capital is available, but it highlights all those other problems associated with getting a new venture off the ground.

"The problems are not over when the finance has been obtained — rather they are just beginning," he said.

If business capital was difficult to obtain, the actual process of launching the new venture was even harder.

"If, so far, you have been unable to raise the capital, could I suggest you reappraise your deal," he told the conference.

CSO: 5500/7531

BRIEFS

RESOURCES COMPUTER COMMITTEE--The Australian Computer Society has formed a new national committee on Computers and Related Technologies in Earth Resources (CRATER). The national president of the ACS, Mr Ashley Goldsworthy, said this was a particularly relevant area of interest in Australia with its huge mineral and mining industries. CRATER, formed on the initiative of the Queensland branch of the ACS, would be concerned with research developments and applications in a variety of fields related to earth resource industries, he said. Graphics, robotics and lasers were among the high technologies being used in the mineral and mining industries. "A deeper look into the field reveals application areas that most people in the computer field would not have even heard of. "Laser meteorology, laser interferometry, fibre optic sensors, and so on give a good illustration of the leading-edge technology being used." The new committee is headed by Ian Moore of Queensland's Geological Survey Department. [Text] [Canberra THE AUSTRALIAN in English 9 Mar 82 p 27]

CSO: 5500/7531

CONFLICTING RECOMMENDATIONS ON NEWS AGENCIES REPORTED

Calcutta THE STATESMAN in English 1 Apr 82 pp 1, 9

[Text] NEW DELHI. March 31.—The Ministry of Information and Broadcasting was today placed in an odd situation with a dual recommendation, one from the Press Commission and the other from the committee of officers, on how many news agencies there should be and how many of them should be patronised by the Government media, All-India Radio and Doordarshan.

The Press Commission has categorically supported the view that there should be two competing English language news agencies and supported the idea that the Press Trust of India and the United News of India, offering competing service, be left undisturbed.

On the language news agencies, the Press Commission has virtually suggested that they be wound up since the "two Indian language agencies were inadequate, both quantitatively and qualitatively".

Instead, it suggested that one of the two English news agencies should provide an efficient news service in regional languages.

But now the committee of officers' suggestions are contrary to the Press Commission's.

According to a statement made by the Minister for Information and Broadcasting in Parliament yesterday, the committee of officers has suggested that AIR should depend on one single English news agency and one language news agency for its news bulletins.

The committee of officers has, therefore, been very specific in saying that there should be two agencies in the country — one English and the other a language agency.

The subsistence of the two English agencies and two language news agencies depend almost entirely on the monthly remuneration received from All-India Radio and Doordarshan. PTI gets Rs 250,000 per month, UNI Rs 193,000 Hindustan Samachar Rs 40,300 and Samachar Bharati Rs 35,500 a month.

The committee of officers also suggested that AIR should be represented on the board of directors of the news agencies to which it subscribed. This was essential, it said, since as a single unit, AIR accounted for slightly higher than one-third of the subscription money realised by the news agencies from all the daily newspapers.

The committee, however, has suggested that the three-year formula between the Government media and the news agencies could be reconsidered if the Press Commission so recommends. The Government is now awaiting the receipt of the Press Commission's report which is due on Monday.

It was to have been submitted today, according to Press Commission sources, the bulky report will be signed by it 12 members on Saturday. The document will then be presented to the Secretary of the Ministry of Information and Broadcasting by the commission's secretary on Monday.

The delay has been caused by the copying of the work, chapter by chapter, and being sent to each member for approval.

CSO: 5500/7113

BRIEFS

TV RELAY--All Doordarshan Kendras [television stations] in the country will soon start telecasting a national program daily. This will be done through Insat IA and microwave links. The 90 minute program will be relayed from Delhi and telecast simultaneously from other centers from 2100 [1530 GMT]. Initially it will be introduced on Delhi-Mussoorie, Bombay-Pune-Bangalore and Madras stations from 1 June. [Text] [BK151617 Delhi Domestic Service in English 1530 GMT 15 Apr 82]

NEWS AGENCY EXCHANGE--The news agency Samachar Bharati will exchange news with a Third World news agency, Inter Press Service. An agreement to this effect was signed with the two agencies in Rome today. They will use the direct satellite link for exchanging news. [Text] [Delhi Domestic Service in English 1530 GMT 9 Apr 82 BK]

RADIO SERVICES--All India Radio plans to introduce a 3-tier broadcasting system--the national channel, regional stations and local stations. A 1,000-kilowatt medium wave transmitter is being set up in Nagpur for the national channel. The existing regional transmitters will form the middle tier and six local stations to be set up to provide community service for specific areas. This was stated in the annual report of the Ministry of Information and Broadcasting. It says the external service broadcasts are also being strengthened. Special plan has been prepared for extension of All India Radio services in the northeastern region. The TV coverages were also being extended substantially. [Text] [BK201717 Delhi Domestic Service in English 1530 GMT 20 Apr 82]

CSO: 5500/2218

BRIEFS

NEW PALAPA SATELLITES--Two Palapa satellites, the B1 and B2, will be launched next year to take over the operations of the A1 and A2 Palapa satellites, whose 7-year operations are due to end. The executive director of the telecommunications corporation, Wily Munandir, said in Bandung that the B1 Palapa satellite will be launched in February 1983 and the B2 Palapa satellite in May the same year. He said that careful and early planning and preparations for the replacement of the Palapa satellites were highly necessary in view of the increasing utilization of this system. Apart from that, it was also because of the growing needs in the future with the rapid satellite technology. The B type Palapa satellite will have a capacity of 24 transponders. Its transmission power will also be bigger and will be able to meet the transmission needs up to 1990 to cover even small towns. [Text] [BK231603 Jakarta Domestic Service in Indonesian 1500 GMT 23 Apr 82]

CSO: 5500/5773

BRIEFS

TELEVISION STATION--Ulaanbaatar, 14 Apr (MONTSAME)--An "Ekran-KR" television station built by Soviet specialists began operation in Omnogobi Aymag a few days ago. Now livestock breeders and miners in Hanhongor Somon and the Taban Tologoy open-cut coal mine will regularly receive Mongolian television programs and see international news in Soviet "Orbita" television programs. [Text] [OW191113 Ulaanbaatar MONTSAME in Russian 1508 GMT 14 Apr 82 OW]

CSO: 5500/2218

BRIEFS

MICROWAVE TRUNK SERVICE--Kathmandu, April 15--Microwave trunk service has been started from Kathmandu to Nepalgunj and Surkhet from yesterday, reports RSS. From now onwards direct telephone connection will be possible between Nepalgunj and Surkhet and any other part of the country. Calls can also be made to any part of the world from any place of the country which has microwave service. Teleprinter link will also be established shortly between the two places, according to Nepal Telecommunications Corporation. Previously it was possible to call Nepalgunj and Surkhet through the wireless at certain fixed hours but henceforth it will be possible to contact the two places at all times as a result of the introduction of the microwave service. [Text] [Kathmandu THE RISING NEPAL in English 16 Apr 82 p 6]

CSO: 5500/5769

BRIEFS

TELECOMMUNICATIONS PROJECT--Islamabad, April 7--The government will launch a new project, worth 287 million dollars to improve national telecommunications service in collaboration with the World Bank, the Asian Development Bank, the Federal Republic of Germany and German suppliers and Japan. The project will improve the standards of service through out the existing telecommunications network and will extend facilities to the new areas besides meeting some demands in areas now provided with facilities. The project will be carried out by the Pakistan Telegraph and Telephone Department and will consist of local network facilities for an additional 52,000 subscribers, toll-ticketing equipment for at least two lakh lines and an increase of about 2,000 circuits on existing subscriber long distance dialing routes. A new 1,800 channel microwave system will be installed and subsidiary routes expanded through the provision of an additional 500 circuits to be achieved largely through the construction of 200 new small exchanges. Additional 300 public call offices will also be established in rural areas under the project. An earth station and a new international gateway exchange will be set up at Islamabad to serve the northern part of the country coupled with installation of a coaxial cable from Lahore to Wagah to facilitate 1,900 additional subscribers to telex and telegraph.--APP [Text] [Islamabad THE MUSLIM in English 8 Apr 82 p 3]

CSO: 5500/5768

BRIEFS

ANSHAN TV TOWER--Anshan municipality is building a television tower which, after completion by the end of this year, will be nearly 183 meters tall. So far some 70 meters of the main part of the tower have been completed. After completion, areas from Haicheng in the south to Liaoyang in the north will be able to receive Anshan television station programs. [Text] [SK151010 Shenyang Liaoning Provincial Service in Mandarin 1100 GMT 14 Apr 82]

CSO: 5500/2218

MORE PHONES FOR RURAL AREAS

Manila PHILIPPINES DAILY EXPRESS in English 14 Apr 82 p 2

[Text] THE MINISTRY of Transportation and Communications said yesterday each town in the country should have at least seven telephones to spur economic development and promote the delivery of government services to the people in the rural areas.

Transport and Communications Minister Jose P Dans Jr. said the present telephone density in the country is only nine telephones for every 1,000 people.

What aggravates the problem, Dans said, is that most of the telephones are in Metro Manila, Cebu, Davao, Bacolod and other cities In the rural areas, Dans said, there is only one telephone for every 400 persons.

* * *

A P7.6 BILLION five-year telecommunications development program aims to increase telephone density to 17 per 1,000 people, Dans said The program aims to increase the number of main telephones in the country to about one million There are only 430,000 main telephones in the country now.

In addition to the program, the United Nations Development Plan (UNDP) has also allotted $1 million for an on-going study on the telecommunications needs of the country, Dans said.

The study, Dans said, is now halfway through and is aimed at developing means of organization and control within the telecommunications industry and the development of a master plan for a national telecommunications network.

* * *

WITH AN efficient nationwide telecommunications system of telephones, telegraph and telex, Dans said, the government can immediately cope with situations in various areas in the country like in the case of natural calamities.

In addition, Dans said, if all towns were linked to the telecommunications network, farmers can sell their produce at better prices since it would be easy to compare prices with other areas.

Dans said the big disparity in the price of produce from the farm gate to the market is caused by the farmers' ignorance on the real value of their produce, thus, they fall prey to middlemen who take advantage of the situation

CSO: 5500/5770

FUNDS FOR VISAYAS TELECOMMUNICATIONS

Manila PHILIPPINES DAILY EXPRESS in English 16 Apr 82 p 7

[Text]

CEBU CITY – A P2.7-billion project that would revolutionize the telecommunications network in the Central and Western Visayas has been proposed to be implemented in five years starting 1983.

The project of the Ministry of Transportation and Communication calls for the use of high density PCM (pulse code modulated) digital technology in the telephone, telegraph, telex, data processing and facsimile services of the Bureau of Telecommunications (BUTEL).

This would cover the Central Visayas provinces of Cebu, Bohol, Negros Oriental and Siquijor and the Western Visayas provinces of Iloilo, Negros Occidental, Aklan and Capiz.

* * *

UNDER the proposal of the ministry, digital machines will be installed in the two regions through the telecommunications systems of the Butel to effect a faster flow of communications.

The modern technology will improve the analog system now used by Butel.

According to the Butel regional office here, the project aims to provide a widespread telecommunications facilities both in rural and urban centers in the two regions so as to stimulate greater productivity and enhance economic development.

CSO: 5500/5770

GOVERNMENT READY TO EXCHANGE MAIL

SK220532 Seoul THE KOREA HERALD in English 22 Apr 82 pp 4, 5

[Text] The modernization of communications services continues, with emphasis on improving postal services this year.

The government is even ready to exchange mail with North Korea, if the Pyongyang regime in the north accepts the Republic of Korea proposal for such an exchange.

Ministry of Communications officials say the communications services will be so improved that they can contribute to the successful holding of the olympics in Seoul in 1988. Seoul was awarded the games in an International Olympic Committee (IOC) meeting held in Baden-Baden, West Germany, last September.

At least one more ground station is expected to be built and ready for use in satellite relay communications by the time of the 1988 olympics. Two such ground stations are now in operation.

The telephone service will continue to be improved this year. As part of the effort, 1,120,000 lines will be newly added to the telephone circuits in the nation's cities. Officials say preparations are under way to develop a facsimile line system.

Television programs may be aired beginning next year using a multiplevoice broadcasting method, officials say.

Efforts will continue this year to solve the television reception troubles experienced in some areas of the country, according to them. And by 1986, the problem should be solved completely.

Following are the features of the communications improvements already implemented earlier this year or planned for implementation during the rest of this year.

In populous areas, interested people will be allowed to offer postal services in department stores, markets, hotels and apartment complexes with licenses from the ministry. Those managing the services will be given a salary from the government.

Officials say licensing civilians to offer postal services will help the government economize on its budget.

The postal service system for handling civil requests for licenses and certificates is now used by the Ministry of Home Affairs. Twenty-seven more government ministries and agencies are expected to use the system beginning July 1.

Under the system, people can mail their civil requests to involved government offices. The licenses or certificates requested will be sent to the requesters through the postal service by the involved government offices. This means people need not go to the government offices to submit their request and to receive the requested licenses or certificates.

The domestic speedpost service was expanded two days ago to include 11 more cities. Until then, 13 cities had benefited from the service since it was inaugurated last October.

Letters, business documents and samples of drafts, books and commercial advertisements are bundled for speedy delivery to their destination under the service. Such items, discluding letters, can also be sent by parcel post under the same service.

Items arriving at a post office by speedpost during the morning will be delivered to their destinations during the afternoon of the same day. Items accepted at a post office during the afternoon for speedpost delivery will reach their destinations during the morning of the next day.

Korea also has international speedpost operations with foreign countries.

The International Postal Insurance Service will also be expanded. Under this service, such items as jewels and securities will be insured against missing or damage during transit.

Postage stamps printed in six colors are expected to be issued beginning in June for the first time in the country. Necessary printing equipment is to be imported next year.

The International Money Order Service will be expanded. By the end of this year, the country is expected to offer this service in 19 foreign areas. Korea is now operating the service with 15 foreign countries.

The domestic money order service will be gradually expanded. Using an on-line system for the service is being considered.

A savings account can now be opened at post offices. The account service was initiated last February 1. The deposit in an account can be withdrawn on advance notice. A similar savings account system is to be inaugurated in December exclusively for farmers and industrial workers.

Postcards carrying business advertisements may be sold in the future. Businesses will have to pay a fee for putting their advertisements on postcards. Some of the revenue from these fees will be used to produce postcards, officials say.

Telephones will be supplied to new subscribers. Officials estimate that the number of telephone owners will increase to 10.4 per 100 people by the end of this year. The rate was 8.9 at the end of last year.

Intercity telephone systems involving operators have been gradually replaced by direct dial operations.

More foreign countries soon will be able to be called by direct dialing. Beginning next year, direct dial calls to 24 countries, including Canada, Australia, Indonesia, Saudi Arabia and West Germany, will be possible, officials say.

They say more than 1,000 telephoneless primary schools in provincial areas will be supplied with telephones by the end of this year. Some of the schools are in remote areas and on islands.

A data communications corporation is expected to be inaugurated in Seoul soon, possibly next week. Preparations have almost been completed for the inauguration. The corporation is to be operated with a capital of 5,980 million won. The capital investment will include 2 billion won from the Korea Telecommunication Authority. The rest will come from 25 private companies.

CSO: 5500/2219

BRIEFS

BEN TRE WIRED RADIO STATIONS--Ben Tre Province now has more than 40 basic wired radio stations with 47 public and almost 700 family loudspeakers. Many villages, subwards, schools and hospitals have used this radio network to propagate the party's lines and policies. The province has also held courses to improve quality of information cadres before assigning them to various localities. [Hanoi Domestic Service in Vietnamese 0400 GMT 14 Apr 82 BK]

TELEPHONE LINK WITH MOSCOW--The Posts and Telegraph General Department recently installed two international telephone lines linking Hanoi with Vientiane and Phnom Penh and Ho Chi Minh City with Moscow. The department also installed four additional international telex machines, thus bringing Vietnam's total telex communications lines to 154 countries. [BK211215 Hanoi Domestic Service in Vietnamese 1430 GMT 18 Apr 82 BK]

CSO: 5500/5773

BRIEFS

NEW RADIO STATION--San Jose, 24 Apr (ACAN-EFE)--The radio station Radio Cultural was dedicated today in Turrialba Canton, 60 km southwest of San Jose. Phillip Von Liechtenstein, the prince of Liechtenstein, attended the ceremony in his capacity as president of the Institute for the Development of Adult Education in America. The institute has been promoting the establishment of a cultural radio network that would transmit in both Spanish and in various Indian dialects. [PA260337 Panama City ACAN in Spanish 2204 GMT 24 Apr 82]

CSO: 5500/2212

CUBA

U.S. POLICY ON 'RADIO MARTI' CRITICIZED

Havana PRISMA LATINOAMERICANO in Spanish Feb 82 p 24

[Article by Victorio M. Copa: "Radio Lies"]

[Text] The United States' decision to set up a radio station to broadcast diversionary radio programs to Cuba is a further act of interference in the internal affairs of the largest island of the West Indies.

President Ronald Reagan's advisers on national security said that the installation--which in principle will be known as "Radio Jose Marti"--is supposedly intended to report to the Cuban people about what their own government is doing."

"After all, the Cuban people deserve to get more thorough information on conditions in the country and on the activities of (President Fidel) Castro's regime," U.S. officials are reported saying.

State Department experts have failed to comment on how this measure will affect talks between the two countries on technical problems in the sphere of broadcasting.

Representatives of the Cuban Institute of Radio and Television (ICRT) and of the Federal Communications Commission (FCC) met in April 1981, alternately in Havana and Washington, to study ways of avoiding interferences in their respective broadcast channels.

The Reagan administration has asked Congress for $10 million worth of appropriations for 1982 to set up the anti-Cuban broadcasting station while it is modernizing existing facilities in Florida and using the Central Intelligence Agency (CIA) and terrorist groups of Cuban nationals to carry out subversive activities.

U.S. Government officials have noted that this radio station scheduled to broadcast programs in Spanish on the medium wave (AM) is similar to Radio Free Europe and Radio Liberty, operated by the CIA and the Pentagon and beamed to the Soviet Union and to countries of the socialist community.

President Reagan's own national security adviser insists in saying that "the Cuban people are entitled to know about what is happening in their country and that to achieve this end, the United States will use all available means."

Diplomatic and journalistic circles in Havana agree that this decision of the Republican administration will institutionalize the radio and propaganda campaign conducted since 1959 by the United States against Cuba.

In July of last year, the U.S. magazine POPULAR ELECTRONICS disclosed that several radio stations are broadcasting against Cuba out of U.S. territory, mainly from the state of Florida.

According to the report, these stations broadcast regular programs without interference from the federal authorities.

POPULAR ELECTRONICS says that among those stations are Radio Trinchera [Radio Trench], the Voice of Independence and Democratic Cuba, the Christian Voice of Cuba, the Progressive Youth of Cuba, the Voice of Alfa 66, Radio Abdala and the Cuban Freedom Radio.

According to the U.S. magazine, there is also a professional-level radio station operating under the name of Radio Free Cuba and that is sponsors claim that it represents the "Christian Democratic Movement of Cuba."

In this new ideological warfare directed against Cuba, the CIA is reported to be attempting to bring together in Radio Jose Marti all counterrevolutionary elements who are already working for pirate stations broadcasting from U.S. territory.

Towards the end of 1981, government officials in Washington indicated that the location of the new stations was yet to be selected but they mentioned several locations in the United States--Florida being one of the possibilities--or in islands of the Caribbean.

During the CIA-organized mercenary invasion of Cuba in Playa Giron (Bay of Pigs) in 1961, that intelligence agency set up a pirate station on Swan Island, off the Central American coast.

The Cuban Center for Marti Studies has denounced the setting up of Radio Jose Marti as being what amounts to a declaration of radio war against the largest island of the West Indies and as a strange peacetime development.

"It proves," the center added, "the absurd and wild hatred which the incorruptible example of Cuba inspired in U.S. rulers."

"While it is true that U.S. broadcasts can reach Cuba, Cuban broadcasts can also get through to the United States and they will not be conveying false and reactionary messages but the voice of truth," the center points out.

It notes that the establishment of this radio station was included in the report issued by the so-called Santa Fe Committee, platform of the current U.S. administration, also containing the very strong threat that "should propaganda fail, a war of liberation must be launched against (Fidel) Castro."

When the president of the Council of State, Fidel Castro, warned the Cuban people that the United States will substantially step up subversive activities against the island, he strongly criticized the setting up of this radio station.

When the president of the Council of State, Fidel Castro, warned the Cuban people that the United States will substantially step up subversive activities against the island, he strongly criticized the setting up of this radio station.

"One must be utterly cynical, immoral and brazen to propose the idea of setting up on U.S. territory a radio station to fight the revolution, to attempt to subvert and destabilize the revolution," the Cuban leader said.

He underlined that, naturally, such a move will not go unanswered and noted that the Cubans will assert their right to use the names of genuine U.S. patriots such as George Washington and Abraham Lincoln.

8796
CSO: 5500/2189

U.S. TRYING TO 'CONTROL COMMUNICATIONS MEDIA'

Havana VERDE OLIVO in Spanish 11 Mar 82 p 19

[Commentary by Carlos Mora Herman: "Who Controls the News Media?"]

[Text] The second meeting of the Intergovernmental Council of the International Program for the Development of Communications (IPDC) ended on 26 January in Acapulco, Mexico, without pain or pleasure.

Two lines of thoughts clashed at the Acapulco meeting.

One, championed by the United States and supported by its allies, is opposed to anything which may affect the monopoly of communications and of transnational news agencies.

The other, advocated by the UNESCO and backed by countries of the Third World, proposes the establishment of a new world information order (NWIO) to liberate developing countries from that monopoly and to allow large masses of people a greater participation in the media.

The International Program for the Development of Communications was set up in 1980 to channel aid projects, to improve radio and television services, the press and news agencies in underdeveloped countries.

The program itself was inspired by a resolution adopted in Belgrade, Yugoslavia, on that same year of 1980, which stated that it was necessary to establish a new information order on a world scale.

The immediate effect was that the United States launched a barrage of propaganda against UNESCO making use of its exclusive control of the Western news media in the field of information and it accused that organization of wanting to turn the news media over to government control and do away with freedom of the press.

UNESCO Director General Amadou Mathar M'Bow, speaking on behalf of that organization, has repeatedly said that the only purpose of the new world information order is to expand the flow of information to reach more countries.

The proposal to create the International Program for the Development of Communications came from the United States in 1979 but now, in Acapulco, it is that same country which has repeatedly refused to contribute funds to launch the proposed projects claiming that they threaten press freedom, a freedom which, as denounced again in Acapulco, is the freedom of those who own the news media and of the transnational news agencies.

In fact, since the end of World War II, the countries of what is known as the Third World have been trying to get their voices heard and to have their interests taken into consideration.

These countries believe in the new world information order and want it but the United States is bent on seeing hidden motives and nonexistent plots in the UNESCO's efforts to turn the wishes of the emerging countries into a reality.

The group of 35 countries representing different political and economic leanings ranging from Saudi Arabia, Norway, Holland, Sri Lanka and Yugoslavia to the United States, China, the FRG and Japan as well as Cuba, the GDR, the USSR and South Yemen, met in Acapulco at UNESCO's request to promote the International Program for the Development of Communications.

Representatives of the Inter-American Press Association (IAPA) and of the World Institute for the Freedom of the Press (Freedom House)--both organizations made up of owners of mass media organizations in Western developed countries--also presented their views at that meeting.

The IAPA, for instance, wants reassurances that government news agencies will not interfere with private organizations. Freedom House concurs on this point.

The truth of the matter is that the developing countries' ideas on the democratization of communications and on the decolonization of information undermine the communications monopolies and the transnational news agencies.

According to Rafael Roncagliolo of Peru, the International Program for the Development of Communications offers possibilities of substantially contributing to democratize the flow of information, both on a national and international level, by reaffirming the cultural sovereignty of nations, by spreading creative forms of horizontal cooperation and by preventing exclusively bilateral forms of assistance often leading to new forms of neocolonialism.

In Acapulco, the nations of what is known as the Third World have accused again the industrialized countries of controlling the news media, of concealing the real situation in underdeveloped countries and of being opposed to the new world information order.

The United States, Japan and the FRG in particular, said at the Acapulco meeting that they were prepared to help privately-owned news organizations and to encourage private investment through bilateral agreements with various countries.

These three countries, which are the major producers of technology in the field of communications, have practically dropped out of the International Program for the Development of Communications.

In Acapulco, the administration of President Ronald Reagan, showed its inclination to favor bilateral relations over multilateral relations and to give preferential treatment in its development programs mainly to the private initiative.

At the root of this view lies the U.S. purpose of increasing the influence of transnational news organizations and the monopoly over communications in an attempt to control the communications requirements of Africa, Asia and Latin America which represent vast markets that can be exploited.

8796
CSO: 5500/2189

BRIEFS

NEW TELEPHONE LINES--An agreement was signed at the Post, Telegraph and Telephone Ministry today between the ministry and the Italian company (Fishi Standar I.T.T.) to install four mobile telephone exchanges in the region of Matrah al-Kubra with a capacity of 4,000 new lines to reduce the pressure on the existing exchange. The project will cost 1,5487,000 [as printed] Omani riyals and will be completed within 6 months. [Text] [GF171525 Muscat Domestic Service in Arabic 1300 GMT 17 Apr 82 GF]

CSO: 5500/2218

BRIEFS

SATELLITE STATION CONTRACT—Doha, 18 Apr (WAKH)--A contract to construct a second ground station, Doha II, for satellite communications which will function with the satellite serving the Atlantic Ocean region was signed today. The 10-million dollar contract was signed with an Italian company by 'Abdallah Nasir al-Suwaydi, Qatari minister of transportation and communication. The station will be operational 6 months from the date of signing. The station will connect Qatar telephonically with the United States, Canada, Latin America, Europe and West Africa. The station will operate on two frequencies. The capacity of each frequency will be 312 television channels, in addition to transmission and reception of television programs to and from the Atlantic Ocean region. Moreover, the station will provide for the exchange of cable and telex services and information. [Text] [GF181729 Manama WAKH in Arabic 1400 GMT 18 Apr 82]

CSO: 5500/2218

NEW SOLAR-POWERED MICROWAVE RELAY OPENED

Djibouti LA NATION in French 4 Mar 82 p 3

[Article: "A New Stage Is Entered in Telecommunications; Djibouti and Ethiopia Are Linked by an Automatic Network"]

[Text] Since the opening of service in July 1980 of a land-based station permitting telephone and telex communications by satellite and computer with France--and very significantly improving even the international communications carried through manual switchboards, the Post and Telecommunications Office, eager to participate actively in the country's extension of its influence and to satisfy the national needs, has been busy seeking the most effective and rapid methods of increasing exchanges with neighboring countries by improving the quality of telecommunications.

Thus, a study for a large regional project called the "Medarabtel Project," undertaken over 1 year ago with the participation of the Post and Telecommunications Office, has been completed, and when it shortly enters the stage of reality it should provide a complete automatic system connecting with all the Arab countries and Ethiopia.

However, as the technical completion of this vast project will take several years, it has been possible to reach an intermediate solution that will permit the exchange of telephone and telegraph communications with Ethiopia on a 24-hour basis by means of an automatic network. Until now, [these communications] have gone over the Djibouti-Ethiopian railroad's carrier current to Dire-Dawa and [thence] by radio to Addis-Ababa, and they could be connected simultaneously only by means of a single, manually operated network.

A new step has just been taken, since after a short trial period (2 weeks) proved conclusive, the official inauguration of the new automatic connection with the Socialist Republic of Ethiopia took place on 1 March 1982.

To do this, a microwave relay system was established linking the Djibouti telephone center with the Ethiopian network via Deloncle Peak and Assab.

The difficulty in achieving this lay first of all in determining a relay point between Djibouti and Assab high enough to overcome any obstacles. Deloncle Peak was selected because of its geographical location in the north of the country, 3 kilometers from Day and 160 kilometers from Assab, and its altitude of 1,780 meters.

As the selected location had no means of access, the setting up of a large amount of power equipment, towers, antennas, and radios became a major problem.

In fact, covering a range of 160 kilometers by microwave is rather unusual and required setting up two 25-meter-high, anchored, triangular towers capable of supporting a 4-meter diameter parabola facing Assab and two Yagi antennae directed toward Djibouti, and installing two buildings in a shelter, each enclosing two transmitters and two radio receivers powered by four groups of 12 batteries with a total capacity of 560 amperes/hour through a voltage regulator, the batteries themselves powered by four solar panels.

All of this equipment, which was brought to the site from Day by several helicopter teams, was installed by technicians from the Post and Telecommunications Office, under the supervision of an expert from French Cable and Radio. It occupies a fenced area of 3,000-square-meters and is under constant surveillance.

Simultaneously, to improve the quality of communications using space diversity, two Yagi antennae were installed on a 40-meter tower in Djibouti. It was also necessary to install two transmitter receivers and connectors to permit adaptation of our network to the Ethiopian network.

Now the Republic of Djibouti is connected to the Socialist Republic of Ethiopia through a 24-channel network, with 12 channels currently in operation.

The cost of this large project, which required 10 months of intensive work under conditions that were often difficult and dangerous, was 100 million Djibouti francs, with the 90 percent owed by the Djibouti Republic financed by the Post and Telecommunications Office.

The effort has been rewarded by the satisfaction of having created a new link with a friendly country which will permit the development of political, economic, and social relations. In any case, this is the hope and ambition of the Post and Telecommunications Office.

The activity of this public entity, which seeks both to be permanent and to develop continually, is now directed toward the construction of an international relay center essential to the exchange of completely automatic communications with the rest of the world.

But first of all, a date has been set for the month of May for a new inauguration: the permanent national microwave network.

9693
CSO: 5500/5716

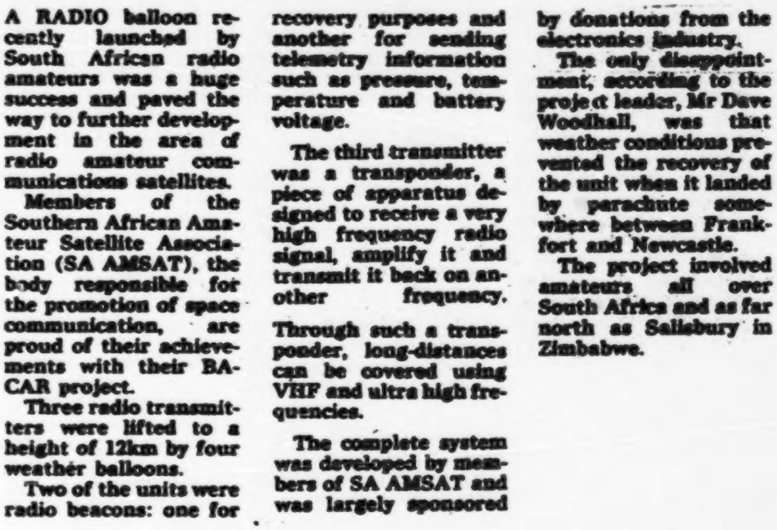
BRIEFS

TV EQUIPMENT PURCHASE--Seychelles took a technical step closer to the age of the television recently when Information Department Chief Engineer, James Palmyre spent six weeks in England. Seychelles is buying the television equipment for its national network from Sony Broadcasting Ltd in England, the company's distributor of studio and other television production equipment for Europe and Africa. Mr. Palmyre told Seychelles Agence Presse after his return on Sunday that in England he had checked the equipment to be bought and their adaptation for use here. These included master control room and electronic news gathering (E.N.G.) equipment and a complete two-camera outside broadcast van which is expected to arrive in Seychelles at the end of April. Mr. Palmyre received some help from the British Broadcasting Corporation in specting and adapting the T.V. van. During his six weeks in England, Mr. Palmyre also followed a three-weeks course on the operation of the equipment. [Text] [Victoria NATION in English 30 Mar 82 pp 1, 2]

CSO: 5500/5767

SUCCESS OF RADIO BALLOON EXPERIMENT REPORTED

Johannesburg THE CITIZEN in English 17 Apr 82 p 11



[Text] A RADIO balloon recently launched by South African radio amateurs was a huge success and paved the way to further development in the area of radio amateur communications satellites.

Members of the Southern African Amateur Satellite Association (SA AMSAT), the body responsible for the promotion of space communication, are proud of their achievements with their BACAR project.

Three radio transmitters were lifted to a height of 12km by four weather balloons.

Two of the units were radio beacons: one for recovery purposes and another for sending telemetry information such as pressure, temperature and battery voltage.

The third transmitter was a transponder, a piece of apparatus designed to receive a very high frequency radio signal, amplify it and transmit it back on another frequency.

Through such a transponder, long-distances can be covered using VHF and ultra high frequencies.

The complete system was developed by members of SA AMSAT and was largely sponsored by donations from the electronics industry.

The only disappointment, according to the project leader, Mr Dave Woodhall, was that weather conditions prevented the recovery of the unit when it landed by parachute somewhere between Frankfort and Newcastle.

The project involved amateurs all over South Africa and as far north as Salisbury in Zimbabwe.

CSO: 5500/5766

BRIEFS

RAILWAYS INSTALL MICROWAVE--The National Railways of Zimbabwe is to replace its overhead telephone route on the Harare-Dabuka line with a microwave system, an NRZ spokesman in Bulawayo said yesterday. He said: "Due to the interference caused by the AC electrification system, the overhead telephone route is to be removed and replaced by a radio microwave system. He said towers are being constructed at eight sites to carry the microwave aerials. "The microwave system will not only carry the railway telephone links but will also carry the signals required for the control of all trains on the Gweru to Lochinvar section of the railway line." [Text] [Harare THE HERALD in English 23 Apr 82 p 3]

CSO: 5500/5772

'PRAVDA' REPORTS ON INTERNATIONAL TELEVISION COOPERATION

LD120904 Moscow TASS International Service in Russian 2130 GMT 11 Apr 82

[Text] Moscow, 12 Apr (TASS)--On 1 February the member countries of the international television union "Intervision" [Intervideniye] began a regular exchange of news via the retransmitter of a "Gorinzont" series satellite. The satellite, which carries the registration index "Statsionar," works within the "Intersputnik" Space Communications System, says the newspaper PRAVDA.

The fruits of successful cooperation in television broadcasting and satellite communications, the article says, can be seen in particular in the "Vremya" program of USSR Central Television. The latest information on events in the fraternal countries is chosen for it. "There are quite a few people in the West who love arguing about the 'free exchange of ideas and information,'" stressed G. Yushkyavichyus, deputy chairman of Gosteleradio, in conversation with a correspondent of the newspaper. "But what are things actually like? Let's just take 'Eurovision,' the television union of Western Europe. There is a curious statistic. Last year it transmitted 6,410 items to 'Intervision,' of which the television organizations of the socialist countries used 5,440. At the same time, out of the 5,395 items offered by 'Intervision,' 'Eurovision' accepted only...415."

The experience of a number of socialist countries, as well as Finland, connected by "intervision," the article points out, convincingly demonstrates that television has the job of promoting the creation of a climate of mutual understanding and trust on the planet and that it can do that job. The chief advantage of a daily direct exchange of news on the "space cable," the newspaper points out, is that it increases the speed with which events can be covered as well as the "transfer" of news. "For example, the possibility has been created where on the same day one can get materials from distant parts of the world--from Cuba, Vietnam. "All this enables the television studios to plan their schedules better and to make more economic use of equipment. The amount of time it takes for exchanges has been stabilized and the procedure for orders simplified. Finally, quite a few ground lines of communication have been freed for other transmissions. The man-made star serves as a reliable point for 'Intervision,' which is confidently stepping into space."

CSO: 5500/2219

REPORT ON NEW SATELLITE SEA RESCUE SYSTEM

PM261111 Moscow PRAVDA in Russian 14 Apr 82 p 6

[Report by A. Gorokhov under the rubric "With the Researchers": "Antennas Near 'Papanin's Hut'"]

[Text] A conference of the international coordinating group for the Kospas-Sarsat project has begun in Moscow. Kospas stands for "space system for searching for ships and aircraft in distress." Sarsat means "search and rescue satellite." The system is being developed by specialists from the USSR, the United States, Canada and France. Apart from those countries' delegations, representatives from Japan, Norway and Britain are also taking part in the conference.

It is planned to launch the first Soviet satellite in the Kospas-Sarsat program in the next few months. This will mark the end of the initial stage of this major international project. When the launch takes place, the picture of the displays at the satellite information reception station located in the suburbs of Moscow, from where I am reporting, will no longer be for training purposes--it will be real.

It will report, to within a few kilometers, if people are in trouble in the Atlantic, the Indian Ocean or the northern seas. But I will not run on ahead.

Some 200 meters from the station's satellite antennas we saw an ordinary hut. Long ago in the thirties, the main administration of the Northern Sea route had its radio center here. The hut was where Papanin's men [reference to Soviet Arctic explorer] lived before their heroic ice epic.

We sat on the mound of earth outside the historic little house and continued talking about Kospas. My interlocutors were L. S. Pchelyakov, chief of a section of the All-Union Morsvyazsputnik Association (this association, which comes under the USSR Ministry of the Maritime Fleet, is directly responsible for the Soviet part of the project), and S. I. Pozvadovskiy, chief of the ministry's central communications network.

The talk began with some explanations. The accident notification systems now used in the fleet are based on traditional means of communication, whose range is limited. And that is one reason why approximately 350-400 ships are lost on the planet's seas and oceans every year.

"That is why an attempt is being made to create a global, all-hearing, mobile system for searching for transport systems in distress," L. S. Pchelyakov said. "It consists of four main components. First, emergency radio beacons. These are being installed on all ships, planes and helicopters. Then the satellites: two Soviet and three American. Their orbits are low, approximately 800-1,000 km. The third component is satellite information receiver stations. These will be located in the American states of California, Illinois and Alaska; in Canada (Ottawa); France (Toulouse) and the Soviet Union (Arkhangelsk, Vladivostok, Moscow and possibly Siberia). Lastly there are the control centers in all four countries, where information will come in via ground channels and from where appropriate instructions will be issued to the search and rescue services."

Many people were able to see a model of a Kospas emergency radio beacon at the Svyaz-81 international exhibition in Moscow. I must say it is an astonishing device. The beacon must be lightweight--less than 5 kg, inexpensive, small in size (it is useful for geologists and fishermen--in a word, all who work cut off from the mainland--and for tourists) and powerful, so that the signal can reach the satellite. Let us also take into account the fact that apart from the satellite transmitter, the radio beacon is also equipped with a "homing" radio beacon and a flashing signal. And on top of all that, the beacon must not sink....

"So a signal reaches the control center. What then?" I asked.

"The center's computer is supplied with a so-called 'positioner' every day," S. I. Rozvadovskiy said, "that is, the locations of vessels in the world ocean. The satellite information is, as it were, superimposed on the 'positioner' and the computer sets about seeking other ships close to the site of the [word indistinct]. The necessary instructions are immediately sent out to the captains of those ships..."

One thing must be added here. A satellite was recently launched by the international organization INMARSAT [International Organization for Maritime Telecommunications by Satellites], which unites 37 countries and is concerned with commercial maritime communications. Sweden's Olaf Lundberg, general director of INMARSAT, was in Moscow at the time.

"Kospas-Sarsat is a very promising system," Lundberg said, "and we will await with interest the result of its 'running-in period.' I think in a year or two we will be able to generalize the results of the experimental operation of all the satellite systems--communications and search systems--in order to link them in a single complex."

...Between the trunks of the birches which stand by "Papanin's hut," the antennas of the reception station are clearly visible. We had only one thought--may those antennas have as little work as possible!

CSO: 5500/2218

INTERVISION TELEVISION DEVELOPMENTS DISCUSSED

PM211145 Moscow PRAVDA in Russian 12 Apr 82 p 4

[Article by L. Chausov: "'Intervision': A Step Into Space--How the International Exchange of Information Is Carried Out"]

[Text] From 1 February this year the countries belonging to the Intervision [Intervideniye] International Television Association have begun the regular exchange of news via the relay transmitter of a Gorizont series satellite. The satellite, which carries the registration mark Statsionar, operates within the Intersputnik Space Communications System.

The fruits of successful collaboration between television and satellite communications can be seen, in particular in the USSR central television program "Vremya." Up-to-the-minute news information from the fraternal countries' lives is selected for it. In order to see how this happens, let us visit the Ostankino television center.

V. Lyubovtsev, chief editor of "Vremya," reports that with the transition to space wavebands the exchange of news within the framework of intervision increased, contacts with partners in the fraternal countries were strengthened and opportunities for creative cooperation with them expanded. All this enables television viewers to learn more about the life of the Socialist Community countries.

I am told that in 1960, when intervision was set up, the exchange between its participants totaled a mere 572 hours of broadcasting. Of course, that is not much--this was the result of the standard of equipment then available and the lack of experience. At first exchange took place via national land communication lines. Then special channels emerged. But the increase in the volume of broadcasting in the intervision network outstripped the rate of development of international lines. The use of space communications promised to resolve many problems. And these hopes were justified. The satellite, permanently "enrolled" in a geostationary orbit, is on duty around the clock.

In intervision's Moscow studio you can see for yourself that space begins on earth. In glass booths specialists armed with sophisticated hardware carry out a routine space session of international television exchange. "Vremya" will soon go on the air, and every minute counts. It is necessary to make video recordings of the topical items from among the general mass of new material which are of interest to central television and to check the quality of the picture and sound.

The pictures on the screens of the multiple monitors change rapidly. The TV centers of a number of socialist countries in succession are switched into the network, offering their video news for the attention of the participants in the exchange. The working language of intercourse by the space voice communications lines is Russian, and "Vremya's" duty editor, sitting at the studio desk, can communicate efficiently with his colleague in the socialist countries.

In the video recording control room they are intensively preparing to assemble the items. They are carefully rehearsing "linkups" and monitoring image and sound clarity. At last it is the turn of the TV reporters from the production group. That means that "Vremya's" call sign is about to go on the air....

The same day I met G. Yushkyavichyus, deputy chairman of the USSR State Committee for Television and Radio Broadcasting. He has long been involved with the problems of intervision and was formerly director of the technical center of the International Radio and Television Organization (OIRT) based in Prague.

"The intervision screen," he said, "by informing us about the facts of what is now happening in Sofia, Moscow or Budapest, brings us all closer to each other. By uniting the viewers it creates a feeling of fellowship among the fraternal countries' peoples, a sense of belonging to a united family. The volume of information exchanged by the different countries' TV organizations is characterized, as a rule, by the level of their mutual interest in political, economic and cultural life. So the increase in the exchange of programs within the framework of intervision, which entered a qualitatively new stage of development with the launching of Intersputnik, is only natural."

The conversation reminded me of Goethe's dictum: "He who does not recognize his friends in the world does not deserve to have the world recognize him." If you try to apply this idea to the mass media, television does indeed increase the opportunities for the socialist countries' peoples to see each other's lives more clearly. And the entire planet can learn more about our community's deeds and concerns and give it due credit for its desire to develop international contacts.

It is significant that television exchange via intervision totaled approximately 5,000 hours in 1981 alone. The participating countries made contact about 30,000 times. I asked my interlocutor how relations with Western TV organizations are organized.

"Many people in the West are fond of talking about the 'free exchange of ideas and information,'" G. Yushkyavichyus notes, "but what happens in practice? Just take Eurovision--the West European Countries' Television Association. Here are some curious statistics. Last year it offered intervision 6,410 items, of which the socialist countries' TV organizations used 5,440. Over the same period, of the 5,395 items offered by intervision, Eurovision accepted only...415. So that is equal, 'free' exchange for you!"

At the same time, my interlocutor goes on, the experience of a number of socialist countries, and also Finland, which have links with intervision convincingly indicates that television must help create a climate of mutual understanding and trust on the planet, and it can do so.

What are the concrete advantages of the daily, direct exchange of news via the "space cable?" I asked Yu. Zubarev, Soviet representative of the Intersputnik Council and USSR deputy minister of communications. The main thing, he noted, is that the reporting of events and the transmission of news has become more rapid. For instance, it has become possible to receive items on the same day from remote regions--from Cuba or Vietnam. All this enables the TV studios to plan their work schedule better and use equipment more economically. The timing of exchanges has become more stable and the procedure for orders simpler. Finally, many land communications lines have been released for other purposes....

Specialists at the Moscow Space Communications Center also told me knowledgeably about these and other advantages of the innovation. The collective led by A. Gafurov sees every day how space "works" for people. From here, from a room where the constellation of earth stations and the satellites themselves is depicted in symbols on a big map, the rhythm is set, the work of the huge networks of space communications is coordinated and their utilization is programmed and monitored.

Looking at the outspread map, I find the symbol "Statsionar-4"--the very satellite now "suspended" in orbit somewhere over the Atlantic. This star, kindled by human intelligence, serves as a reliable strong point for intervision, marching confidently into space.

Here in the satellite communications systems control room you can see very clearly what benefits can come from outer space when it is exploited for peaceful purposes, for the good of man.

CSO: 5500/2219

BRIEFS

SATELLITE STATION COMPLETED--Assembly of equipment at a receiving station for signals received by earth satellites from ships in distress has started in Archangel today. Similar stations will be built in Moscow and Vladivostok. At the moment a plan is being discussed in Moscow for a space search system for ships and planes in distress. The system envisages the launching of five artificial satellites which will cover the whole surface of the world's oceans. [Text] [LD150116 Moscow Domestic Service in Russian 1630 GMT 14 Apr 82 LD]

NEW TELEVISION STATION--A new television station of the 'Ekran' system has been put into service in the (?Khufskaya) valley, high up in the Pamir Mountains in the Gorno-Badakhshanskaya Autonomous Oblast, in order to receive television pictures from Moscow. There are now 12 such stations in operation in the oblast. Assembly of another 'Ekran' television station is under way in the remote Vakhanskaya Valley. [Moscow Domestic Service in Russian 1330 GMT 13 Apr 82 LD]

CSO: 5500//2219

BRIEFS

ICELAND TO JOIN NORDSAT--Oslo--The Icelandic Government has decided to join in the Nordsat project, Norwegian Culture Ministry undersecretary Jan S. Levy announced yesterday. The television satellite project will proceed in the next 2 years and involve Finland, Iceland, Norway and Sweden. Denmark will participate as an observer. The cost to the four countries is expected to amount to around 44 million markkaa in the 2-year period. [Text] [PM191037 Helsinki HUFVUDSTADSBLADET in Swedish 14 Apr 82 p 7]

CSO: 5500/2218

PAPER FAULTS GOVERNMENT'S TELEDATA FEASIBILITY TRIAL

Copenhagen BERLINGSKE TIDENDE in Danish 6 Apr 82 p 8

[Editorial: "Teledata"]

[Text] When, several years ago, the Telecommunications Services decided to carry through teledata testing, their objective was to find out if the new medium may be marketed in Denmark, who will be using it, and at which times it will be used. However, it is exceedingly doubtful that the testing, which was started some days ago, will provide an answer to these questions.

The feasibility trial involves a limited number of receivers. The persons who have receivers know that they are participating in an experiment, and they may hardly be expected to act as a public who has deliberately decided to acquire teledata for the purpose of using it. To this comes that, so far, the amount of information available for the experiment is limited. The fact that so many information suppliers have expressed a desire to participate in the teledata feasibility trial is due to a desire to participate rather than an endeavor to use teledata. The daily newspapers have thus joined the experiment without having any great illusions as to its possibilities but solely because the newspapers have a natural interest in placing themselves in relation to the media development which the new technology makes possible. The prevailing opinion within the Media Commission, which has discussed the teledata feasibility trial, has been that it must be viewed in a broader social context than planned by the Telecommunications Services. It goes without saying that the very limited scope of the testing prevents it from providing any real basis for evaluating how teledata may conceivably be used.

On the whole, there is reason to believe that the Telecommunications Services have acted prematurely. It is hard to blame them for wanting to work constantly with technical developments, and the regard for their often very long-term planning makes it reasonable. However, the experience from abroad already shows that teledata may not so easily find the place envisioned just a couple of years ago. The British who, at a very early stage, made enormous efforts to place teledata as an important communications factor, have had to recognize that they have been spending much money in vain. It is true that the British Prestel has proved useful to the trades and industries, but it has, on the other hand, been a failure, as far as the general public is concerned.

The Danish feasibility trial might presumably have been postponed without any harm. The Telecommunications Services, however, had been working with it for so long that it had to be started, and it, therefore, is to be hoped that they will be able to give it such content that it will find useful application.

7262
CSO: 5500/2203

FIRST SATELLITE-TV TRANSMISSION TO FINLAND REPORTED

Helsinki UUSI SUOMI in Finnish 27 Mar 82 p 9

[Article: "Helsinki TV Has Begun Satellite Programs"]

[Text] Finland entered the era of satellite television on Friday at 8:30 pm when Helsinki Television transmitted a program to 74,000 households via satellite.

It is still not a question of regular satellite broadcasting since the individual viewer cannot receive a program transmitted by satellite.

This was the first time that a program transmitted directly by satellite was received in Finland. Previous satellite transmissions have come from Sweden through a link-up connection.

Helsinki Television's first satellite transmission lasted 1 hour and the program included mountain climbing, skiing, flying, an animated movie, and music. The English Satellite Television Ltd., which has begun European satellite programming, has promised that regular programming service will begin in the middle of April.

Until then Helsinki Television will transmit so-called entertainment programming, which has been received in Helsinki since the beginning of March, states Managing Director Heikki Saraste of Helsinki Television. Satellite programs are seen on the information channel.

The satellite broadcasts will for the time being be sent only to Finland since other interested countries such as Norway and Malta, among others, have not reached the same technical level. Also Holland and Belgium are interested in satellite transmissions.

Saraste emphasizes that it is a question of an experimental project by which viewers could be offered one additional service. In addition to the satellite, the continuation of this service also depends on how the satellite programming is received by the public.

Saraste does not want to disclose the kind of programming that will be transmitted by satellite in the future. He states that initially the 1-hour and later 2-hour broadcasts will be composed of movies, TV-series, sports, and music. The programming will also include commercials. Finnish subtitles have not been provided for the programs.

According to Saraste Satellite Television has promised to send advance listings of its programming, which will be distributed to the newspapers.

The state-owned radio has adopted a rather doubtful attitude toward the operations of SATV. Mattsson says straightout that the English company has not been able to announce its programming since it is difficult to accumulate.

"On the whole, quality films or series will not be seen on SATV programming. Popular European programs, disco drivel, sports, and so on will be transmitted via satellite," states Mattsson.

"Not very competitive programming."

The state-owned radio is also amazed that this satellite experiment came up rather surprisingly without any parliamentary discussion. The Postal and Telecommunicatons Administration granted HTV an experimental license on the basis of its authority to take this matter under consideration. The office also leased a receiving antenna. The Postal and Telecommunications Administration is also experimenting with satellites for its own purposes.

The first actual TV-satellite will be launched from the German Federal Republic in 1985 and the next one will be from France in 1985--86.

10576
CSO: 5500/2184

JPRS 80832

17 May 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 217

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 80832

17 May 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 217

CONTENTS

WORLDWIDE AFFAIRS

Briefs
USSR Agreement With Kampuchea 1

ASIA

AUSTRALIA

Disagreement Flares Over Domestic Satellite Issues (THE AUSTRALIAN, 19, 22 Mar 82) 2

Choice of Bandwidth
Commercial Viability Questions, by Claire O'Grady

Government Computer Systems Put WA First Among States (Graeme Atherton; THE WEST AUSTRALIAN, 20 Mar 82) 4

First Micro-Computer Information Service Begun in Melbourne (THE AGE, 16 Mar 82) 5

BANGLADESH

Briefs
Overseas Phone Services 6

INDIA

Panel Criticizes 'Deteriorating' Phone System (PATRIOT, 16 Apr 82) 7

Daily National Television Program To Begin in June (PATRIOT, 16 Apr 82) 8

Plans for Use of First Domestic Satellite Told (H. Kusumakar; THE TIMES OF INDIA, 4 Apr 82) 9

Foundation for TV Satellite Center Laid, Gandhi Speaks
(THE TIMES OF INDIA, 11 Apr 82) 11

Reporter Notes Shortcomings in INSAT Project
(S. Kumar; THE TIMES OF INDIA, 11 Apr 82) 12

Gandhi Address Mass Communications Institute
(THE TIMES OF INDIA, 14 Apr 82) 15

No Decision on Collaborator for Electronic Exchanges
(THE HINDU, 7 Apr 82) 16

Contribution to ITU for Communications Year Planned
(THE HINDU, 15 Apr 82) 18

Automatic Exchanges for All Districts by 1985
(PATRIOT, 19 Apr 82) 19

Briefs
Norwegian Phone Exchanges 20

NEPAL

Briefs
Telex Exchange Equipment Arrives 21

PHILIPPINES

Objections Raised on Integrated National Telecommunications System
(BULLETIN TODAY, 19 Apr 82) 22

LATIN AMERICA

BRAZIL

Communications Infrastructure With Europe, U.S. Set by 1990
(O GLOBO, 21 Mar 82) 23

Briefs
Satellite Report Delay 27
Microwave Stations in Rondonia 27
Possible DIGIBRAS Sale to Hungary 27

NEAR EAST AND NORTH AFRICA

IRAN

Briefs
New Television Relay 29

SUB-SAHARAN AFRICA

INTER-AFRICAN AFFAIRS

Briefs
'PANA' Meeting Scheduled 30

ANGOLA

Briefs
Luanda-Benguela Telephone Line 31

ETHIOPIA

Briefs
Resumption of Telecommunications 32

USSR

Briefs
Amplification of Radio Signals 33

WEST EUROPE

FINLAND

CP Minister's Ban of UK Satellite TV Stirs Outcry
(HELSINGIN SANOMAT, various dates) 34

Paper Concerned Over Wahlstrom's Ruling, Editorial
Conservatives' Chairman Charges 'Censorship'
Firm Vows to Continue Transmissions
Liberal Party Worried Over 'Freedom of Expression'
Minister Wahlstrom Defends Stand

FRANCE

Arianespace, American Shuttle Compete Economically, Technically
(Jacques Tiziou; AVIATION MAGAZINE INTERNATIONAL,
1-14 Mar 82) 40

NETHERLANDS

Briefs

Ericsson Supplying Mobile-Phone System 43

SWEDEN

Bill on Nordic Satellite System Appears To Fit Tele-X
(Bjorn F. Hansen; SVENSKA DAGBLADET, 4 Apr 82) 44

Mission, Function of Tele-X Satellite Described
(Roland Gyllander; DAGENS NYHETER, 17 Apr 82) 46

BRIEFS

USSR AGREEMENT WITH KAMPUCHEA--A long-term agreement and protocol were signed for the first time today in Moscow on cooperation in radio broadcasting between USSR state television and radio and the Voice of the People of Kampuchea radio. They provide for an exchange of radio material on the life of the peoples of the USSR and the People's Republic of Kampuchea and reciprocal assistance in preparing programs on major events in the life of the two countries. The documents were signed by Yuriy Viktorovich Orlov, deputy chairman of the USSR Committee for Television and Radio Broadcasting and (Van Sun Heng), acting general director of the Voice of the People of Kampuchea radio. [Text] [LD301118 Moscow Domestic Service in Russian 1000 GMT 30 Apr 82]

CSO: 5500/2217

DISAGREEMENT FLARES OVER DOMESTIC SATELLITE ISSUES

Choice of Bandwidth

Canberra THE AUSTRALIAN in English 19 Mar 82 p 17

[Text] A SATELLITE specialist's plea to the Australian Government to reverse its decision to use high frequency bands as a crucial part of its Aussat satellite strategy has sparked a major industry row.

Aussat Pty Ltd, the government-backed company which will own and operate Australia's domestic satellite system, has slammed suggestions made by Dr Norman Abramson that high frequency bands would prove inefficient as "grossly inaccurate".

Mr Graham Gosewinckel, general manager of Aussat, said yesterday "a tremendous amount of time and effort went into making this choice. Our final selection of high frequency bands instead of low ones was endorsed by overseas consultants."

The row erupted when Dr Norman Abramson, professor of electrical engineering and computer sciences at the University of Hawaii and a recognised world authority on satellites, warned that a plan to operate small dish antennae at high frequency levels could cost Australia an extra $500 million over the next 10 years.

The susceptibility of high frequency band widths, which transmit and receive signals between ground station dish antennae and satellites, to rain, would also mean that households in the Northern Territory would not be able to reap the benefits.

Exactly how much the Aussat satellite, which is due to be launched in early 1985, is going to cost Australia has yet to be worked out.

Commercial Viability Questions

Canberra THE AUSTRALIAN in English 22 Mar 82 p 20

[Article by Claire O'Grady]

[Text] THE recent row between Aussat Pty Ltd, the Government-backed body which will own and operate Australia's first satellite, and a world communications specialist has raised a question mark over the future financial viability of the system.

The dispute erupted late last week when Dr Norman Abramson, professor of electrical engineering and computer science at the University of Hawaii, warned that a plan to operate smallish antennae at high-requency levels could cost the country an extra $500 million in the next 10 years.

Exactly how much the satellite will cost Australia has yet to be worked out. Negotiations between the big US Hughes Corp. which will build the system, and the Fraser Cabinet are said to be continuing.

But in a special statement to the Australian, Mr Graham Gosewinckel, general manager of Aussat Pty Ltd, slammed Dr Abramson's suggestions as "grossly inaccurate".

High-frequency band widths, he maintained, would still be used.

It is the use of these high-frequency band widths, which are used to transmit and receive signals between ground-station dish antennae (user earth stations, they are sometimes called) and satellites, which is at the heart of the dispute.

When the Hughes satellite system for Australia, AN HS376, goes into orbit in early 1985 it will beam signals at a high frequency level.

But even though Australia is the last developed country in the world to join the satellite race, the move toward high frequency levels is not new.

In the US, IBM's Satellite Business Systems model is already using high-frequency band widths, while the Canadian Telesat and the French PTT are poised to operate satellites in this frequency range.

Hughes, which has designed and built communications satellites for a host of users, including Western Union, Comsat, and General Corp, will be putting its newest system into orbit for the Australian contract.

The future commercial success of the HS376 spacecraft will rely ultimately on the outcome of the Australian network.

The HS376, which can be launched from a variety of space vehicles such as Delta-class vehicles or the space shuttle, can deliver voice, video and facsimile in configurations tailored to the specific needs of customers.

Design life options of spacecraft based on the HS376, owing to increased onboard fuel capacity and other technological improvements, can be extended from seven years to 10, Hughes Corp claims.

To say that the HS376 is the latest technologically advanced communications satellite offering would be to underestimate what is probably one of the most sophisticated models around today.

Weighing approximately 1055kg, the HS376 carries its own Apogee motor, which is fired to place the satellite into orbital position in space.

The marriage of satellite technology with the processing power of the computer has slashed the cost of global information transmission making this form of communication the most lucrative ever conceived.

The natural emergence of rival satellite consortiums in Australia like Business Telecommunications Services Pty Ltd, and the media group launched during late 1980 has split the Australian satellite market wide open.

This is a development that must surely put greater pressure on the Aussat system to be an overwhelming success.

The recent plea by Dr Abramson to the Fraser Cabinet to make a U-turn in its satellite strategy and adopt low frequency bands has focussed attention on just this: the inherent vulnerability of a satellite on which so much depends.

Dr Abramson maintained that if high frequency levels were used in the Aussat system, not only would they add an extra $500 million to the country's satellite bill, but their use could also mean that households in the Northern Territory would not be able to reap the benefits.

The susceptibility of high band widths to rain — it rains a lot in the Northern Territory — would jar signals, making television programmes, for example, unwatchable.

Low frequency levels, stressed Dr Abramson, were cheaper and could operate under all weather conditions.

But Mr Gosewinckel hit back: "People in the NT and other remote parts of Australia would be able to pick up the satellite signals."

He added: "Dr Abramson's view that the use of low frequency levels for the Australian system would permit the reception in remote areas of television programmes grossly in accurate."

CSO: 5500/7533

GOVERNMENT COMPUTER SYSTEMS PUT WA FIRST AMONG STATES

Perth THE WEST AUSTRALIAN in English 20 Mar 82 p 10

[Article by Graeme Atherton]

[Text] Two big new computer systems being developed by the State public service will put WA in front in the technological revolution.

But as well as breaking important new ground in the storage of official information, the new systems could provoke fresh concern about the invasion of privacy by government data banks.

A new justice/welfare information system is scheduled to start operating with next month's opening of the new Central Law Courts building in St George's Terrace.

It will record information affecting all departments involved in justice related procedures—from the time a crime is committed until the offender has served his sentence.

Police investigations of criminal suspects, court appearances by offenders, witnesses, jurors and officials, sentencing and parole and other details will be filed on the central computer.

Private information supplied by welfare agencies in cases involving juvenile offenders will also be recorded—but police access will be restricted.

Information stored in the computer system will enable detailed studies of the nature and circumstances of crime and the punishment.

The lack of such information was criticised by the former Ombudsman, Mr Oliver Dixon, during his recent inquiry into WA's high rate of imprisonment.

The other development will bring together in one system information from numerous government departments on all aspects of land use and ownership in WA.

A register of all owners of freehold land in WA, together with a legal description of the land and its geographic location, will be included.

A similar register will be kept of all crown land in the State.

The new system will speed up title searches and surveys of land for conveyancing purposes.

The chief executive officer of government computing, Mr Dennis Moore, said yesterday that WA had become a trend-setter in the use of computers in government.

"We're big enough for this to happen, but still small enough for people to talk to each other," he said.

"This has enabled a tremendous degree of co-operation between departments which other States just haven't been able to achieve."

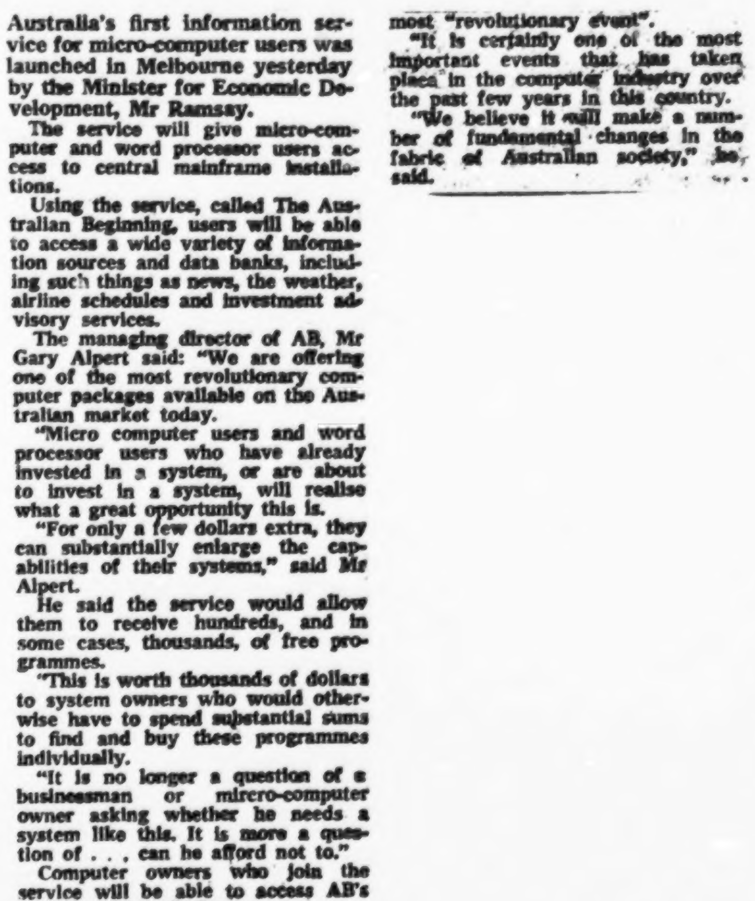
But Mr Moore said, that the Government was concerned about privacy issues.

Because of this concern, the police computer system would be separated from the justice system to prevent the police using certain private information about individuals.

CSO: 5500/7533

FIRST MICRO-COMPUTER INFORMATION SERVICE BEGUN IN MELBOURNE

Melbourne THE AGE in English 16 Mar 82 p 34



[Text] **Australia's first information service for micro-computer users was launched in Melbourne yesterday by the Minister for Economic Development, Mr Ramsay.**

The service will give micro-computer and word processor users access to central mainframe installations.

Using the service, called The Australian Beginning, users will be able to access a wide variety of information sources and data banks, including such things as news, the weather, airline schedules and investment advisory services.

The managing director of AB, Mr Gary Alpert said: "We are offering one of the most revolutionary computer packages available on the Australian market today.

"Micro computer users and word processor users who have already invested in a system, or are about to invest in a system, will realise what a great opportunity this is.

"For only a few dollars extra, they can substantially enlarge the capabilities of their systems," said Mr Alpert.

He said the service would allow them to receive hundreds, and in some cases, thousands, of free programmes.

"This is worth thousands of dollars to system owners who would otherwise have to spend substantial sums to find and buy these programmes individually.

"It is no longer a question of a businessman or mircro-computer owner asking whether he needs a system like this. It is more a question of . . . , can he afford not to."

Computer owners who join the service will be able to access AB's computer via telephone.

Mr Alpert described the launching of Australian Beginning as being a most "revolutionary event".

"It is certainly one of the most important events that has taken place in the computer industry over the past few years in this country.

"We believe it will make a number of fundamental changes in the fabric of Australian society," he said.

CSO: 5500/7532

BRIEFS

OVERSEAS PHONE SERVICES--Due to introduction of Intelsat V Satellite System in the Indian Ocean region in May 1982 Betbunia Satellite Earth Station will undergo a planned modification programme from April 21, 1982, says a PID handout. The modification will continue up to May 25, 1982. During this period Betbunia Satellite Earth Station will be off the air and all international telephone services will be diverted through Talibabad Standard "B" Satellite Earth Station. However, it is expected that there should be no delay in passing of Overseas Trunk Calls of the subscribers. In some cases calls to distant stations may utilise double hops of Satellite Communication in which case there will be slight time delay noticed by the subscribers to get reply from the other end during their conversation. The Eurovision programme of Television News will however, continue without any interruption. [Text] [Dacca THE BANGLADESH OBSERVER in English 14 Apr 82 p 8]

CSO: 5500/7125

PANEL CRITICIZES 'DETERIORATING' PHONE SYSTEM

New Delhi PATRIOT in English 16 Apr 82 p 4

[Text] The committee on Public Undertakings (PUC) has criticised the deteriorating telephone system in the country, reports PTI.

The phenomenon of dead telephones, wrong calls, cross talks and other disturbances not to speak of overbilling, is a common occurrence PUC said in its 38th report on Indian Telephone Industries Ltd—research and development and new projects, presented in the Lok Sabha on Thursday.

The system seemed to have deteriorated steadily, it said.

The committee observed that it is a pity that during the last more than 30 years the ITI could not perfect even the telephone instrument.

The latest design with the Japanese dial though an improvement over the present design was not free from some major defects associated with the receiver and the transmitter.

It urged that there should be no further delay in the import of technology, which was inevitable. A decision taken in December 1977 to import know-how for the manufacture of telephone was yet to be carried out.

With the rapid change in technology there was 'regretably a gap of at least a decade' between our country and abroad, it said.

The committee said limited resources of R and D, unreliability of components and sub-systems and lack of product engineering expertise had hardened the country's development.

ITI, however, seemed confident of replacing most of its product lines by entirely modern and reliable ones within the next five to six years' time provided its products and collaboration proposals were cleared speedily.

The committee had expressed the hope that the Ministry would approach the task with a sense of urgency that it deserved. The committee observed that there was no doubt that production engineering and quality control in the ITI were not sound.

CSO: 5500/7121

DAILY NATIONAL TELEVISION PROGRAM TO BEGIN IN JUNE

New Delhi PATRIOT in English 16 Apr 82 p 10

[Text] A DAILY national programme will be relayed from Delhi Doordarshan and simultaneously telecast by all TV centres in the country from 1 June, 1982.

According to Information Ministry press release, Doordarshan is embarking on this new exercise taking advantage of the networking facilities being established through INSAT-I and P and T microwave links.

The national programme, which is due to last one and a half hours every day from 9 p.m. to 10.30 p.m., will initially be introduced from Delhi, Mussoorie, Bombay-Pune-Bangalore and Madras stations that are already linked up by P and T microwave circuits. Other TV stations will start the programme as and when they are linked with Delhi through INSAT-I or microwave circuits.

As is known, the scheme for utilisation of INSAT-I for TV provides for linking all Doordarshan Kendras through the satellite. Efforts are being made by Doordarshan to utilise this facility for telecasting TV programmes soon after the satellite becomes operational in June, 1982.

The programme will also be relayed by the new transmitters being set up under the INSAT scheme in Andhra Pradesh, Orissa, Bihar, UP, Gujarat and Maharashtra. Of added importance is the fact that 14 transmitters are being set up in different parts of the North-East region for the purpose of having the programme relayed in this area. Initially seven transmitters will be set up in each of the seven State Capitals of Assam, Arunachal Pradesh, Nagaland, Manipur, Meghalaya, Tripura and Mizoram.

The national programme will include two national news bulletins, one in Hindi at 9 p.m. and the other in English at 10.15 p.m. The bulletins will carry national and international news with visuals. All TV centres will regularly feed Delhi Doordarshan with news and visuals through microwave links and the satellite. Doordarshan Kendras will, in addition, continue to telecast their own regional news bulletins.

The programme will be mainly in English and Hindi and the emphasis will be on information, education and entertainment alongwith stress on unity in diversity of the Indian culture, traditions, music and dance, the objective being promotion of national integration. The educational items would be related to family welfare and health, science, environment and sports. Entertainment items are to include plays, skits and other popular features.

CSO: 5500/7121

PLANS FOR USE OF FIRST DOMESTIC SATELLITE TOLD

Bombay THE TIMES OF INDIA in English 4 Apr 82 p 9

[Article by H. Kusumakar]

[Text] BANGALORE, April 3.

INDIA'S first of the two national satellites (INSAT), designed specifically for the nation's requirements by Ford Aerospace and Communications Corporation (U.S.), will be launched into space on April 8.

Within about 43 hours after lift-from Cape Canaveral (U.S.), the satellite will be located somewhat west of Delhi over the equator. A month later, it becomes operational.

The second satellite, identical to the first in all respects, is under integration now. Its launch is slated for July next year. It will be slotted into space east of Calcutta. This spacecraft will be a spare in the Rs. 275-crore INSAT system.

Each of the two satellites will have a life of seven years, some 35,680 km above the earth. Once placed in their geostationary orbits, the satellites will match earth's 24-hour rotational period and thus remain stationary over a fixed point on the globe.

What will the INSAT system do? The system has several segments. The first to be taken up for implementation are the space segment, which includes the launching of the two satellites called INSAT-1 and INSAT-1B, establishment of a master control facility at Hassan in Karnataka, a telecommunications ground segment and a meteorological ground segment. Then will follow a radio networking ground segment and an initial television ground segment.

UNIQUE SYSTEM

During orbit-raising activities, the master control facility at Hassan will be supported by remote tracking station services from Andover (U.S.) and Carnarvon (Australia). The Hassan facility, now fully operational, has specific functions in satellite commanding, ranging and testing, reception and processing of satellite telemetry, ranging and test data and orbital analysis.

The first generation INSAT system represents India's first step towards implementing "operational" space systems for identified socio-economic objectives. It is intended for long-distance telecommunications (telephony, data and *facsimile*), round-the-clock meteorological earth observation and data relay, direct TV broadcasting to augment community TV sets in rural areas and networking of terrestrial TV transmitters and regional and national networking of radio transmitters. In its multipurpose nature, the system is unique.

NO CROSS-TALKING

The enhanced meteorological data provided by the INSAT system will benefit agriculture, aviation, ports and shipping and hydro-meteorological and flood forecasting services, with data coming in half-hourly. Compared to pre-satellite methods, some 12 to 24 hours advance identification of cyclones and consequently early warnings will be possible. A meteorological data utilisation centre has been located at the premises of the India Meteorological Department at Lodi Road, New Delhi.

The telecommunications component will provide over 8,000 two-way long-distance telephone circuits potentially accessible from any part of India, even the remotest without regard to intervening terrain and terrestrial distances.

Telephone subscribers getting connecions to their long-distance points via INSAT and who have not previously experienced a satellite circuit, will find a difference. If the call is through INSAT, the telephone signal has to travel far into space and back. To avoid a user hearing his own voice echoed back to him, an "echo suppressor" has been devised which inserts an impedence into the reverse path when a person talks and removes the impedence when he stops talking.

Briefly, cross-talking is not possible. Elsewhere, the use of satellite communications has resulted in increased politeness of telephone conversation because of this.

Radio networking via INSAT is designed to provide a reliable and high-fidelity five-channel regional as well as national capability.

All India Radio plans to deploy 94 five-channel radio networking receive-only terminals by the end of 1982 or early 1983 in a phased manner. In the meantime, Delhi, Trivandrum, Ahmedabad, Gauhati, Srinagar, Dibrugarh, Bhopal, Hyderabad, Imphal and Kohima will have radio networking via INSAT.

The space segment of INSAT will provide two nationwide TV broadcast channels for direct satellite-to-augmented-community-TV-receivers in rural parts where direct satellite TV coverage has been deemed to be more cost effective, and national or regional networking of terrestrial transmitters.

The constraining factor in large-scale growth of INSAT TV utilisation is essentially the investment involved in the provision of community TV receivers. It is to be noted that reception of any programme broadcast from one terrestrial TV station at other stations of Doordarshan will depend upon the active transmission of the programme up to the satellite and its reception and rebroadcast at the other stations.

The government has plans for replenishment of the first generation INSAT spacecraft, procured from abroad, from 1990-91. The spaec research and development profile for the

1980-1990 decade provides for design, fabrication and launch of proto-INSAT, the second generation INSAT test spacecraft called INSAT-II. The current time-line for the launch of proto-INSAT is late 1986 or early 1987.

The definition of the functional requirements of proto-INSAT has commenced in co-operation with agencies participating in the INSAT system — P&T department, Indian Meteorological Department, All India Radio and Doordarshan. It is to be noted that APPLE, the Indian experimental communications technology satellite, launched in June 1981, has been the first major step in the direction of developing indigenous capability for design, fabrication, qualification, testing and mission management.

CSO: 5500/7115

FOUNDATION FOR TV SATELLITE CENTER LAID, GANDHI SPEAKS

Bombay THE TIMES OF INDIA in English 11 Apr 82 p 9

[Text] Nagpur, April 10 (UNI). The Prime Minister, Mrs. Indira Gandhi, today exhorted scientists and Doordarshan officials to make ready the necessary software for ultimate success of the Indian satellite programme for the benefit of the country's rural masses.

Addressing a huge gathering on the occasion of laying the foundation of the national channel of All India Radio and the Doordarshan satellite television centre at Seminary Hills here, Mrs. Gandhi said there were sufficient talented people who could take up the challenge to modernise the country and improve the quality of national radio and television programmes.

Mrs. Gandhi said that the people were conscious of the increasing importance of radio and television in national developmental programmes as both the media were easily intelligible.

She observed that radio and television needed to be utilised more effectively and this would soon become a reality with the increase in the number of available channels, making it possible to broadcast and transmit to a wider audience different programmes representing all shades of opinion.

Earlier, the union information and broadcasting minister, Mr. Vasant Sathe, said it would be his ministry's endeavour to improve the quality of radio and television programmes to suit national interests.

The chief minister, Mr. Babasheb Bhosale, said the foundation of the television relay centre in Nagpur marked an important chapter in Maharashtra's history of achievements.

Mrs. Gandhi arrived half an hour behind schedule after visiting the social worker, Baba Amte, at Anandwan, in Warora, and the Sarvodaya leader, Acharya Vinoba Bhave, at his Paunar ashram.

The foundation for the administration building of AIR's national channel transmitter here marks the first phase of a Rs. 80-crore proposal to set up a proper and exclusive outlet for broadcast of national programmes to listeners all over the country.

The proposed national channel network will comprise setting up highpower transmitters in Nagpur, Bangalore and Vadodra, along with a number of medium- and low-power medium wave transmitters.

CSO: 5500/7118

REPORTER NOTES SHORTCOMINGS IN INSAT PROJECT

Bombay THE TIMES OF INDIA in English 11 Apr 82 pp 1, 9

[Article by S. Kumar]

[Text] Bombay, April 10. Lack of advance planning, lop-sided priorities and poor coordination may turn the multi-crore commercial satellite--INSAT into a "white elephant".

The precious life-time of the satellite is being wasted for periods ranging from several weeks to many months, as the ground facilities have not yet been fully commissioned to avail of all the benefit from the satellite.

To save the satellite-time, in telecommunications segment, even the gaps of a few seconds available during telephone conversations are not wasted and techniques have been evolved to transmit some other channel of conversation during such gaps.

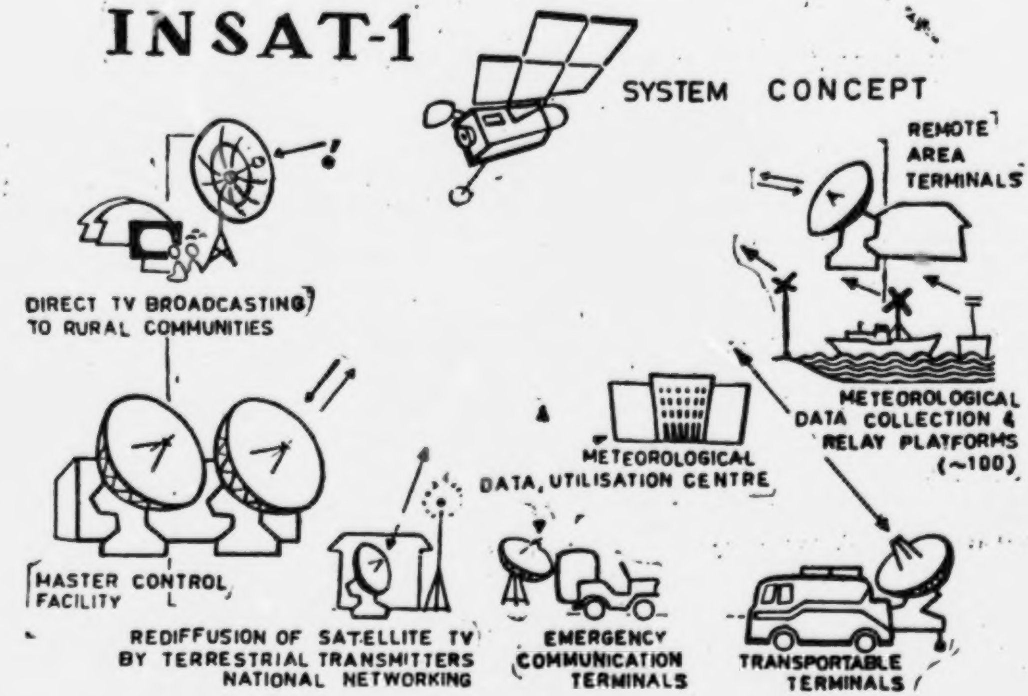
Only the earth stations in Delhi, Bombay, Calcutta, Madras and Shillong seem to be somewhat ready for transmitting and receiving signals from INSAT. It is not known when the rest of the promised medium and small earth stations will become operational.

One of the objectives of INSAT is to telecast programmes to rural areas but till date not a single programme has been made for that purpose. The TV stations are functioning as if INSAT does not exist. The planning commission had turned down the earlier proposals of Doordarshan as INSAT programmes did not enjoy any priority. It will be futile to beam the existing urban-oriented programmes to the rural areas and the present facilities and manpower in TV stations are already under great strain.

According to a spokesman of Doordarshan, at least two years before the launching of the satellite, funds should have been earmarked and programmes planned. It is learnt that recently some funds have been allocated for the TV programmes.

Take for instance Nagpur where an earth station is to be set up for telecasting TV programmes to the rural areas. Even the survey of electrified villages in the area has not yet been completed and the target-villages not yet chosen.

About 2,000 villages in just 19 districts are expected to be covered by INSAT-transmitted TV programmes. Each village needs a community direct receiver set (with special TV antenna) which may cost around Rs. 15,000. Just now, the Electronic Corporation of India is being approached for making the 2,000 sets. Even ignoring the vast financial outlay required for providing community TV sets and direct receivers, it is not known how long the manufacture of the equipment will take.


INSAT-1
SYSTEM CONCEPT
REMOTE AREA TERMINALS
DIRECT TV BROADCASTING TO RURAL COMMUNITIES
METEOROLOGICAL DATA COLLECTION & RELAY PLATFORMS (~100)
METEOROLOGICAL DATA UTILISATION CENTRE
MASTER CONTROL FACILITY
REDIFFUSION OF SATELLITE TV BY TERRESTRIAL TRANSMITTERS NATIONAL NETWORKING
EMERGENCY COMMUNICATION TERMINALS
TRANSPORTABLE TERMINALS

sets and direct receivers, it is not known how long the manufacture of the equipment will take.

According to observers, even the Satellite Instructional Television Experiment (SITE), conducted with the loaned services of an American satellite, was well-planned. SITE covered 2,400 villages and the special programmes were ready six months before the launching of the programme.

Doordarshan may have to be content with simultaneous relay of the Republic Day parade or Independence Day celebrations from Delhi to a few state capitals for a couple of years to come.

Even in the weather front, special data collection platforms have not yet been set up. However, Delhi may be able to receive the weather data soon. After all, for the past many years, the Indian meteorological department has been receiving weather data transmitted by foreign satellites. INSAT will cover a wider area of the country and relay the data for a longer period.

Turning to the telecommunications segment, five major cities are expected to be linked by satellite telephone communications from May 20, a full 40 days after the launching of the satellite. There is a provision for 8,000 telephone circuits to be shared by these five centres, which forms a fraction of the current demands for the telephone lines.

Satellite communications will be better in quality compared to the present microwave or coaxial cable communications channels. But, the bitter fact remains that neither the over-worked telephone exchanges nor the instruments can be improved by INSAT. Perhaps, an immediate advantage of INSAT can be found in establishing emergency communications with inaccessible areas during natural calamities.

INSAT is an "adopted" child. Just as the satellite the master control facility at Hassan and all the earth station equipment were also made abroad. The Post and Telegraphs department, for its own reasons, hurriedly imported the equipment three years ago. The launching of INSAT itself was delayed by more than a year. Indian scientists offer to manufacture earth station equipment indigenously was then turned down by the department "for lack of time".

Indian scientists have already proved their ability to build a fairly large earth station and the Arvi earth station is a standing example. They have lost a valuable opportunity to gain first-hand experience in fabricating a large number of sophisticated equipment and the chance to create sufficient trained manpower. By the time sufficient number of people are trained in this technology, the existing facilities woud have become outdated and the vicious circle of easy import would continue.

To discount the suggestion that INSAT-I is an expensive proposition for a developing country like India, the U.S. International Communication Agency quotes Prof. S. Dhawan, chairman of the Space Commission, as saying: "Even though only one of the three services — the telecommunications part — has any revenue-earning capacity, the satellite will yet be able to pay for itself within three years. In that context, the money spent on the satellite system is small."

"Our approach is that in the next ten years there will be a gradual transformation of experimenting with systems and the building of capabilities to the utilities of them".

A scientist compared the launching of INSAT-I to that of India buying the first Boeing — we are still buying the foreign-made aircraft.

Another said on the launching of INSAT that he did not even have the thrill he experienced when the indigenously fabricated APPLE was launched last year. However, he was anxious that the spacecraft should be safely berthed in the geo-stationary orbit. Though INSAT has been insured in the event of any mishap, again an Indian insurance company had to shell out a staggering amount.

CSO: 5500/7118

GANDHI ADDRESS MASS COMMUNICATIONS INSTITUTE

Bombay THE TIMES OF INDIA in English 14 Apr 82 p 15

[Text] NEW DELHI, April 13 (PTI).

THE Prime Minister, Mrs. Indira Gandhi, said today that she does not favour giving autonomy to radio and television right now.

Addressing Indian and foreign scholars of the Indian Institute of Mass Communication (IIMC) here, she said, "We have to use radio and TV to get through to the people development programmes of gigantic proportions."

There was a need to build people's self-confidence and where the press did not co-operate, it was necessary for radio and TV to step in and play the role of confidence-builder, she said.

Noting that the opposition viewpoint should also be projected in the media, Mrs. Gandhi said the overall objective should be to build up a congenial atmosphere for development.

She said that in some developed countries the home office or the foreign office does exercise pressure over the press and their press does not object to it. "We don't even have that power here," she said.

Asked what could be done to ensure that the big Indian papers used more news from the non-aligned world, she said, "We can only try persuasion."

Mrs. Gandhi said that the western press and much of the Indian press attacked the non-aligned news pool saying that the media in the non-aligned world was largely under the control of authoritarian regimes.

"My answer is that may be. We will get government controlled news. But at least we get that. Others are free to give their versions. We don't stop them and we get both points of view," she said.

The main world news agencies operated from Europe and America and they projected only the point of view of the countries of those regions, Mrs. Gandhi said.

Mrs. Gandhi said that the non-aligned movement was "very relevant" today. The fact that more and more countries were joining it provides evidence of its relevance. Even the aligned countries were adopting non-aligned postures, she said. She agreed with a questioner who said that the non-aligned countries were not a "solid, united group", but asked, "which group is united?". The military blocs also have internal differences, she pointed out.

India, she said, approached American and European countries in its efforts to develop steel and oil, but it was the Soviet Union which finally helped build the country's steel plants and exploit oil resources.

On the arms race in the sub-continent, she said, "We were not speaking of Pakistan's acquisition of arms out of fear. We said induction of arms would increase tension and bring the world closer to confrontation."

On the forthcoming Indian cricket team's tour of England, she said, "No Indian team will play with any team that has played in South Africa." When she had allowed the MCC to tour India last winter, she had consulted some African leaders, she said.

CSO: 5500/7119

NO DECISION ON COLLABORATOR FOR ELECTRONIC EXCHANGES

Madras THE HINDU in English 7 Apr 82 p 9

[Text] NEW DELHI, April 6.

Some major considerations have thrown up a big question mark over the choice of collaborators for the two proposed factories to manufacture the equipments for electronic exchanges during the Sixth Five Year Plan.

The Posts and Telegraphs Department is deeply worried over these developments which are bound to delay decisions. The cost of the factory, earlier estimated at about Rs. 65 crores, has already gone up to over Rs. 100 crores. It will climb even higher if the decision is further delayed.

FACE favoured: No decision has yet been taken on the choice of the collaborator for the manufacture of a new model telephone, though a technical committee had favoured FACE, the Italian subsidiary of International Telephones and Telegraphs (ITT) of the U.S., against Siemens of West Germany.

There are two major considerations in respect of the electronic exchanges. The first is whether the choice should rest on the basis of the technical evaluation of the tenders made by the competing bidders, or the offer from the French company Cit-Alcatel, should be accepted under a larger technical cooperation agreement between the Governments of India and France.

The second point is whether the scope of the collaboration should be widened to include the manufacture of electronic components also in India. Both Siemens and ITT are reported to be willing to make offers for this.

Proven system: Among the considerations which the evaluation of the tenders will have to take into account will be the capability of the parties to offer a proven system.

One of the factors which had weighed against FACE of Italy but later ignored as not being of much consequence was, that the Italian P and T administration had not wholly accepted it. A similar situation exists in respect of Siemens regarding its own system for electronic exchanges.

According to reports from Germany, the digital exchange system offered by Siemens is still under field trials being carried out by the West German P and T administration, Bundespost, along with the equipment supplied by two other companies, Standard Elektrik Lorenz, a subsidiary of ITT and the Dutch Philips group.

Though the French Government had earlier made a determined bid to get the contract for the electronic exchange factory under an inter-governmental cooperation agreement, later the French company Cit-Alcatel, also participated in the global tender, floated by the Indian Telephone Industries (ITI). The other bidders were Siemens of West Germany, ITT of U.S., British Telecom, GTE of U.S., NEC, Hitachi and Fujitsu of Japan and Philips of Holland.

Evaluation: The P and T has been asked to complete the evaluation of the tenders as quickly as possible. The technical documentation submitted by the companies is now under examination and matters relating to the financing of the projects will be taken up later.

There is some satisfaction among the other bidders that the French company's offer will also go through the process of evaluation. But they are also aware that nothing commits the Governments to choose a collaborator purely on the basis of technical evaluation.

If acceptance of the French offer under a bilateral economic cooperation arrangement will better serve the larger national interests, the Government may do just that.

CSO: 5500/7117

INDIA

CONTRIBUTION TO ITU FOR COMMUNICATIONS YEAR PLANNED

Madras THE HINDU in English 15 Apr 82 p 6

[Text] NEW DELHI, April 14.

The Government of India will contribute $20,000 to the International Telecommunications Union (ITU) for observance of 1983 as the "World Communications Year" (WCY). The nodal Government agency for the observance of the WCY will be the Ministry of Communications.

The main objectives of the year are to provide an opportunity for all countries to take up an in-depth review and analysis of their policies on communications development and to accelerate the development of communications infrastructure.

The decision to observe 1983 as the WCY was taken by the U.N. Assembly at its 36th session held between September 15 and December 18, 1981.

The ITU, the U.N. specialised agency, handling telecommunications matters has been designated as the lead agency for the WCY and it will be coordinating the inter-organisational aspects of the programmes and activities of other agencies.

The Government of India has already set up a national coordination committee under the chairmanship of the Secretary of the Ministry of Communications. The first meeting of the committee held earlier this week discussed a programme.

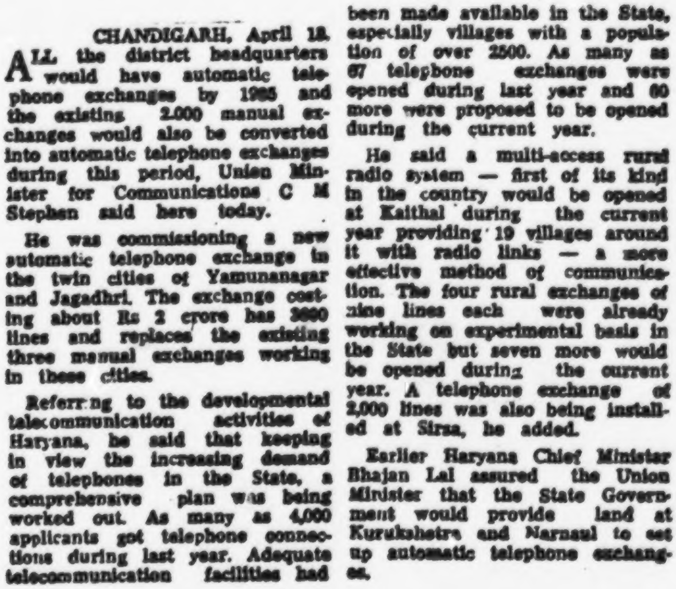
It included (i) improving the efficiency of the P and T services and facilities, (ii) strengthening the communication support for irrigation and agricultural farm management and instructional broadcast through radio and television via satellite, (iii) the priorities for strengthening the telecommunication infrastructure, (iv) data communication via INSAT, highway and inland waterway communications, communications for small fishing vessels providing telephone facilities in passenger trains and distress communication during floods, etc.

CSO: 5500/7120

AUTOMATIC EXCHANGES FOR ALL DISTRICTS BY 1985

New Delhi PATRIOT in English 19 Apr 82 p 9

[Text]



CHANDIGARH, April 18.

ALL the district headquarters would have automatic telephone exchanges by 1985 and the existing 2,000 manual exchanges would also be converted into automatic telephone exchanges during this period, Union Minister for Communications C M Stephen said here today.

He was commissioning a new automatic telephone exchange in the twin cities of Yamunanagar and Jagadhri. The exchange costing about Rs 2 crore has 3000 lines and replaces the existing three manual exchanges working in these cities.

Referring to the developmental telecommunication activities of Haryana, he said that keeping in view the increasing demand of telephones in the State, a comprehensive plan was being worked out. As many as 4,000 applicants got telephone connections during last year. Adequate telecommunication facilities had been made available in the State, especially villages with a population of over 2500. As many as 67 telephone exchanges were opened during last year and 60 more were proposed to be opened during the current year.

He said a multi-access rural radio system — first of its kind in the country would be opened at Kaithal during the current year providing 19 villages around it with radio links — a more effective method of communication. The four rural exchanges of nine lines each were already working on experimental basis in the State but seven more would be opened during the current year. A telephone exchange of 2,000 lines was also being installed at Sirsa, he added.

Earlier Haryana Chief Minister Bhajan Lal assured the Union Minister that the State Government would provide land at Kurukshetra and Narnaul to set up automatic telephone exchanges.

CSO: 5500/7125

BRIEFS

NORWEGIAN PHONE EXCHANGES--Norway is going to supply five electronic rural telephone exchanges costing about Rs one crore to India under the Indo-Norwegian Technical Assistance Programme covered by the agreement on 1 January 1981 between the two governments. The five containerised metaconta rural exchanges, manufactured by Messrs STK of Norway are to be installed at Nainital (800 lines), Almora (400 lines), Ujhani (250 lines), Telecom Training Centre at Lucknow (64 lines) and at Advanced Level Telecommunication Training Centre, Ghaziabad (64 lines). In pursuance of the agreement, a plan of operation was signed in the Capital on Friday by P and T Board Director N.S. Ramchandran and Norwegian Embassy Councillor Vidkunn Issken. [Text] [New Delhi PATRIOT in English 17 Apr 82 p 5]

CSO: 5500/7123

BRIEFS

TELEX EXCHANGE EQUIPMENT ARRIVES--Kathmandu, April 18--Telex exchange equipment weighing to 22 tons arrived here yesterday for installation at the new international telecommunications building nearing completion at Tripureshwar, reports RSS. This was the third and last consignment of telecommunications equipment to be flown by DC 10 freighter aircraft into Kathmandu. The previous two were for the new earth satellite communication station being built at Balambu. The combined earth station and telex exchange station both part of the British development programme, will enable telex subscribers to connect themselves automatically to any part of the world via the Indian Ocean satellite, Intelsat V. [Kathmandu THE RISING NEPAL in English 19 Apr 82 p 1]

CSO: 5500/5777

OBJECTIONS RAISED ON INTEGRATED NATIONAL TELECOMMUNICATIONS SYSTEM

Manila BULLETIN TODAY in English 19 Apr 82 p 26

[Text]

The Philippine chamber of communications voiced out strong objections over the weekend to the single integrated national backbone for voice, telegraph and telex recently ordered by Transportation and Communication Minister Jose P. Dans, Jr.

The ministry circular stated, among other things, that the integrated national backbone shall be capable of handling both voice and data traffic at a speed of at least 64 kilo bits per second (KBPS) for data transmission, including signalling.

It also stated that the use of voice (any type) outside of the Philippine Long Distance Telephone Co., the enfranchised voice carrier, shall not be authorized.

The record communications sector, PCCI said, was particularly opposed to the concept of a single integrated backbone system.

The association said in a position paper presented to Dans that the circular was a contradiction, or a misinterpretation in the least, of certain government orders.

PCCI said one homogeneous national telecom network prescribed by the approved 5-year development plan did not necessarily mean one backbone.

To interconnect, PCCI members said, means to integrate facilities but not to have one backbone for both voice and data. They said effective integration allows interconnection of two or more backbones.

Citing the Western Union experience of living in a dependency on the facilities of the telephone carriers which, they said, is a lesson to be learned and avoided — PCCI was objecting to placing record communications in a secondary and dependent position to the telephone industry.

PCCI foresees the predicament where the record communications industry could not expect the proper response and support of PLDT who is already burdened with its own service problems.

CSO: 5500/5781

COMMUNICATIONS INFRASTRUCTURE WITH EUROPE, U.S. SET BY 1990

Rio de Janeiro O GLOBO in Portuguese 21 Mar 82 p 34

[Text] With the opening of the Atlantis undersea cable, as of August of this year, Brazil will be taken care of until 1990 by a satisfactory communications infrastructure with Europe and the United States. Then the Brazilian Telecommunications Company (EMBRATEL) will go with the third-generation cables, the great innovation of which will be the possibility of transmitting perfect TV pictures from one continent to another through glass fiber optic conductors.

It is possible that the new cables will be available in 1985 with a much greater transmission capacity than that of the coaxial cables currently in use. When the latter emerged in 1943 they made it possible to transmit telephone calls and telex signals, initiating a technological revolution that carried mankind far from the time when undersea cables were utilized only for telegraphic communications. Also further and further removed is the time of piracy, when fishermen dived into the sea in search of copper of which the conductors of the first cables were made to sell it as scrap metal.

Old Cables

Ten of those old cables started from Recife alone, the capital of Pernambuco, having been installed mainly by the Western and Brazilian Telegraph Company. Beginning in 1883, after the first concession given by Emperor Dom Pedro II--who heeded a suggestion in that regard by the Baron of Maua--Brazil became linked to Madeira Island, Maldonado (Argentina) and Miami, in the United States. In addition, dozens of other cables permitted telegraphic communications between Belem and Manaus (through the Amazon River). Belem to Recife, Recife and Rio de Janeiro, Rio de Janeiro and Vitoria, Salvador and Rio de Janeiro, Recife and Sao Luis, Rio de Janeiro and Santos, Natal and Florianopolis, and Santos and Chi.

The old cables had copper conductors 1 centimeter in diameter. Therefore, a few meters of those cables weighed a lot when sold as scrap metal. With their deactivation, it became more economical for the companies that operated them to abandon them on the bottom of the sea than to have them removed.

The acts of piracy then increased, with fishermen being aided by the nautical charts that indicated the location of the cables. It is probable that none of the old telegraph cables are left; all of them have already been transformed into scrap.

Second Generation

At the present time, communications abroad by cable are made via the Brus [cable], which goes from Fortaleaz, to the U.S. Virgin Islands a distance of 2,256 nautical miles (one nautical mile equals 1,853 meters); and via the Bracan-I, which goes from Recife to the Canary Islands, Spain, covering a distance of 2,630 miles. The Brus was put into operation in 1980, and has 640 equivalent voice channels; that is, it permits the simultaneous transmission of 640 communications. Bracan-I has 16 channels.

Both belong to the second generation of cables, the coaxial cables, like the Atlantis that is being installed between Recife and Dakar in Senegal, and from there to Lagos, in southern Portugal. The Atlantis will be the most powerful of all, with 1,800 equivalent voice channels, and it will cover a total distance of 3,450 nautical miles (1,750 between Recife and Dakar, and 1,700 until Lagos). Brazil associated itself with nine other countries to install it--Argentina, Senegal, Ivory Coast, Portugal, Italy, Germany, Switzerland, France and England--and is the largest stockholder in the consortium. The Brazilian share is 28.6 percent of a total expenditure of $200 million.

Atlantis

The installation of the Atlantis cable began in October 1981. The Recife-Dakar section is ready and the work on the second section is nearing Portugal, with the cableship laying 40 miles of cable per day in the bottom of the ocean.

A cableship is a vessel built especially to lay and repair undersea cables. They belong to the large companies that operate communications systems of that type: the American Telephone and Telegraph (AT&T) of the United States; the British Telecommunication International, of England; and the Administration Francais de Postes et Telecommunications, for example. AT&T is also the owner of the largest such ship currently in operation, the "Long Lines," 511 feet (177 meters) long.

Installation

The ships have special tanks to transport cables and all the apparatus to lay them in the bottom of the sea. Tractors especially made to bury the cables in the seashore and bathymeters that follow the descent of the telecommunications equipment to the bottom of the sea are some of that special equipment. They will soon also be equipped with minisubmarines that will facilitate keeping up with and even expediting the installation work.

The vessels are contracted by the cable makers for the installation and by the consortiums of countries that operate the cables for maintenance service. Only four companies in the whole world are engaged in making cables: Standard Telephones and Cables, of England; Les Cables de Lyon, of France; Simplex, of the United States, and Ocean Cables, of Japan. Being installed at the present time, in addition to the Atlantis cable, are the Atlas, linking Portugal and Morocco, and the Anzcan, between the west coast of Canada and Australia.

Risks Are Great Near the Coast

The contract of the cableships for laying operations ends as soon as the cable goes into operation. But that is not the case with maintenance: the consortiums of operating countries keep the ships they need for the repairs that are necessary periodically under permanent contract. Brazil is included in the agreement for maintenance of the cables in operation in the Atlantic: the Atlantic Cable Maintenance Agreement (ACMA), comprising 14 countries. The ACMA has five ships at its disposal which remain on duty at strategic ports in the region (Canada, the United States, England, Spain and France). Fifty undersea cables are being now operated in the Atlantic region.

The greatest risks are external ones. From the technological viewpoint, the only defect a cable develops is at the repeaters installed every 5 miles. In case of a defect or accident, the control stations locate the section affected in less than an hour with the aid of computers. Various tests are then conducted to identify the type of damage and establish what emergency plan will be utilized. The cable ships are called only when complete information about the damage is available because they have to leave the support port with all of the equipment and parts the repair will require.

Brazil is taken care of by the cableship "Mercury," which stays anchored in the port of Vigo, in Spain. When the damage occurred to the Bracan-I cable in September 1980, the ship required only 2 days to make the repairs.

Contracting the cableships for maintenance services costs ACMA $16,000 per day each. In case it is activated for repairs, that cost increases 30 percent. The costs are established in terms of the length of the cable and its position in relation to the port where the ship remains anchored. In the case of Brazil, its annual contribution to ACMA varies between $200,000 and $250,000.

The maximum diameter for an undersea cable is 10 centimeters, but that occurs when it is near the coast because of the greater protection that the conductors need--actually layers only 1 millimeter thick separated by insulating areas made of polyethylene. The external protection is made of jute and pitch. The useful life of coaxial cables is approximately 25 years. In general, that type of cable begins to develop defects at the repeaters after 10 years of use.

This technology began to be developed in 1943 and the first cable with transatlantic characteristics was installed in 1956, linking the United

States and England, and having 23 equivalent voice channels. Telephone, telegraph and telecommunications connections are established by means of the cables. There is also the possibility of transmitting TV pictures but only for distances under 700 kilometers (Japan uses coaxial cable for that purpose).

But the great revolution in this regard will occur after the installation of the first glass fiber optic conductor cables, which will be able to contain up to 12,000 equivalent voice channels. It will be precisely the greater capability that will permit the transmission of pictures because that requires the simultaneous use of 900 channels. That way, an alternative to transmissions via satellite will be established, granting that the costs will be equivalent.

8711
CSO: 5400/2127

BRIEFS

SATELLITE REPORT DELAY--Brasilia--The Communications Ministry extended until 5 April the period for submitting the final report that will name the winner of the bidding to supply the Brazilian domestic satellite. Ministry sources asserted yesterday that there is no impasse in the selection of the winner, stressing that selection of the bids is taking into priority account the counterpart imports which the two consortiums presented, the price, the time period, the financing of the satellite and the transfer of technology. On 15 January, when the Canadian Spar and the French Aeroespaciale consortiums presented their definitive bids to the Communications Ministry, it was determined that the ministry would present its decision in 60 days. However, the committee charged with analyzing the bids has not concluded its work and yesterday asked Communications Minister Haroldo de Mattos for an extension of time. Ministry experts have avoided talking about the bids being studied but it is known that both the French and Canadians presented a price that is considered quite high for the installation of the satellite, the space segment, the ground stations and the launching, in the neighborhood of $200 million. Technically, both plans are considered excellent. [Sao Paulo O ESTADO DE SAO PAULO in Portuguese 20 Mar 82 p 10] 8711

MICROWAVE STATIONS IN RONDONIA--Porto Velho--By August 1982, the entire section between Porto Velho and Cuiaba, approximately 1,500 kilometers, will be served by the line-of-sight microwave trunk-link, with repeater stations every 40 kilometers, at an investment of approximately 3.7 billion cruzeiros, (in December 1981 prices), according to the announcement of engineer Wilson Luiz Cardoso, chief of the Brazilian Telecommunications Company (EMBRATEL) operations district in Porto Velho. Yesterday part of that section was put into operation between the capital of Rondonia and Ji-Parana, covering the intermediate municipalities of Ariquemes, Jaru and Ouro Preto, for a total of eight repeater stations, making possible the direct reception of television pictures in the four municipalities and also increasing from 180 to 1,800 the intercity voice channels. That number can still be tripled, which should guarantee the flow of telephone traffic in Rondonia until the year 2010. According to engineer Wilson Cardoso, as a result of this, another city in Rondonia has its direct dialing system in operation--the municipal seat of Cacoal, 450 kilometers from Porto Velho--in addition to enabling the Rondonia Telephone Company (TELRON) to activate 2,000 new telephone terminals in Ji-Parana. [Sao Paulo O ESTADO DE SAO PAULO in Portuguese 17 Feb 82 p 12] 8711

POSSIBLE DIGIBRAS SALE TO HUNGARY--Brasilia--Hungary may become the first socialist country to purchase high technology Brazilian equipment in the area of data processing, including electronic and electroacoustic components, telephone equipment, copying machines and data processing ancillary equipment. According to the Brazilian Data Processing Corporation (DIGIBRAS), those products would be included in the new bilateral cooperation agreement to be signed with Hungary during the visit of Hungarian Vice Minister, Otto Herckner, to Brazil next week. Herckner is going to meet on Tuesday with the president of DIGIBRAS, Ambassador Paulo Cotrim. [Rio de Janeiro O GLOBO in Portuguese 27 Mar 82 p 24] 8711

CSO: 5400/2127

BRIEFS

NEW TELEVISION RELAY--According to a Central News Unit report, thanks to collaboration between the staff of the technical repair and maintenance unit of the Voice and Vision of the Islamic Republic of Iran in Mashhad center and the group engaged in extending the television network of the Voice and Vision of the Islamic Republic of Iran, the 'Aliak television relay system was set up on 9 April this year and officially started work as of 29 April. The relay system transmits the first programs of the Vision of the Islamic Republic of Iran on Channel No 7 with a power of 10 watts and brought the 'Aliak, Moshkan, Soltanabad, Robat-e Jaz (Borqabant), Chahak and (Anbarestan) regions between Heyshabur and Savsevar under the coverage of the Vision of the Islamic Republic of Iran. [Text] [Tehran Domestic Service in Persian 1630 GMT 29 Apr 82 LD]

CSO: 5500/2217

BRIEFS

'PANA' MEETING SCHEDULED--Harare--A meeting on the launching and operation of the Pan African News Agency (Pana) in Southern Africa would be held in Lusaka in June, the deputy editor-in-chief of the Zambian News Agency (Zana), Mr David Kashweka, said in Harare yesterday. He returned to Zambia yesterday after a three-day visit to Zimbabwe to hold discussions with officials of the Zimbabwe Inter-Africa News Agency (Ziana) before Pana's launching, scheduled for early next year. Ziana, Zimbabwe's semi-official news agency, reported that Mr Kashweka had also come to guage whether Zimbabwe's telecommunications links would be able to cope with Pana traffic. He told Ziana that Zimbabwe was one of six countries he had visited which would form part of Pana's Southern African region. The others were Malawi, Mozambique, Botswana, Lesotho and Swaziland. Pana's headquarters would be in Lusaka. From what he had seen, Mr Kashweka said, there would be "no problem" with information traffic between Harare and Lusaka or the other countries in the region with the exception of Lesotho. The present state of telecommunications facilities in Lesotho meant information had to be passed through South Africa. Regional meetings of Pana member states were being held in preparation for a joint meeting in Dakar, Senegal, at the end of June where the results would be studied. While in Zimbabwe, Mr Kashweka also discussed a "bilateral working relationship" between Zana and Ziana.--Sapa [Text] [Johannesburg THE CITIZEN in English 1 May 82 p 10]

CSO: 5500/5779

BRIEFS

LUANDA-BENGUELA TELEPHONE LINE--The National Telecommunications Company (ENATEL) has inaugurated an automatic telephone service between Luanda and Benguela. The number to dial to call Benguela from Luanda is 0099, followed by the desired number, and the number to call Luanda from Benguela is 0097, with the same number used for calls from Lobito to Luanda. [Excerpt] [Luanda JORNAL DE ANGOLA in Portuguese 21 Apr 82 p 4]

CSO: 5500/5774

BRIEFS

RESUMPTION OF TELECOMMUNICATIONS--Asmara (ENA)--The post office and telecommunications building which was wantonly destroyed by secessionist bandits in the town of Keren was put to service yesterday following reconstruction work at a cost of 30,000 Birr. Repair of the building was part of the overall project in Eritrea region of the Red Star Multi-Faceted Revolutionary Campaign. Comrade Yusuf Ahmed, Minister of Transport and Communications and COPWE Central Committee member, who presided over the reopening ceremony of the repaired post and telecommunications building in Keren acknowledged the active involvement of members of the revolutionary army in the reconstruction work. The Minister noted that bandits not only destroyed functioning public facilities but had also blocked planned development projects in the region. He disclosed that preparations have been finalized to launch improved communication network in Keren province. Comrade Yusuf said that the organization of the peasantry and the urban masses has greatly facilitated postal services in Ethiopia which he described as exemplary in Africa. He said that microwave and other telecommunications links are also planned for Keren province in line with the recommendations of the Second Plenary Meeting of COPWE Central Committee. [Excerpt] [Addis Ababa THE ETHIOPIAN HERALD in English 23 Apr 82 p 1]

CSO: 5500/5780

BRIEFS

AMPLIFICATION OF RADIO SIGNALS--Moscow, 3 Apr, TASS--The reliability of radio and telephone communications has been considerably improved of late in the Dzhambul Region, Kazakhstan, writes MN [Moscow News] Information. The vast distances between the republic's relay stations result in signal attenuation and high noise levels. The Institute of Physics and Mathematics has therefore devised an original system, which, not unlike a concave mirror, focuses radio rays, amplifying and directing them towards relay stations. The new system, called a phase correcting reflector, increases the power of a signal four-fold without consuming any additional energy. Such passive reflectors are especially valuable for mountainous areas, where hills hinder communications in the centimetre wavelength band. They require no maintenance and can be installed practically anywhere. [Text] [Mosocw TASS in English 0614 GMT 3 Apr 82 LD]

CSO: 5500/2217

CP MINISTER'S BAN OF UK SATELLITE TV STIRS OUTCRY

Paper Concerned Over Wahlstrom's Ruling

Helsinki HELSINGIN SANOMAT in Finnish 14 Apr 82 p 2

[Editorial: "Fear of Satellite Exeeded Ability to Evaluate"]

[Text] The Communications Ministry has prohibited the Postal and Telecommunications Administration from conducting a test reception of satellite transmissions in Helsinki. The postal administration which transmitted test programs to Helsinki Television's cable network, was criticized for the fact that it had infringed on the state-owned Finnish Broadcasting Corporation's carefully guarded area of jurisdiction. According to Communicatons Minister Jarmo Wahlstrom the joint experiment was not well thought-out since legislation concerning cable television operations has not yet been enacted.

The Communications Ministry's determination that the technical experiment should be stopped is surprising and lacking any understandable justification. In practice it means that the Postal and Telecommunications Administration is prohibited from studying and exploiting new means of communication in a manner that serves the people. This determination is in complete contradiction with the objective that technically and economically the best possible results in the transmission of information between countries is expected of the Postal and Telecommunications Administration. This objective cannot be accomplished if the postal service is only given the authority to carry letters.

With its decision the ministry has placed telecommunications administration officials responsible for technical experiments in a regrettable situation. There is good reason to ask what circumstances give the ministry the right to interfere in normal technical experiments, whose goal is to develop international communications and services to society.

On the other hand, the political background of the ministry's decision is clear and "expedient". Satellites are the future means of communication, which will considerably expand the possibilities of television services, among other things. At that time people will have an opportunity in principle to follow programs transmitted directly from other countries. For example, the monopoly position of the Finnish Broadcasting Corporation would no longer be complete in the area of ethereal communications.

In Finland international competition is feared by the Finnish Broadcasting Corporation, at whose apparent initiative the Communications Ministry has now prohibited satellite experiments. Indeed, Minister Wahlstrom has his own ideological reasons for this ban since the internationalization and liberalization of the transmission of information does not serve the centralized communications model promoted by the Communists. The Communists and the People's Democrats have persistently opposed the joint Nordic satellite project, among other things, fearing that the control and supervision of officials will be reduced.

It is an exaggeration of self-defense when a technical experiment is prohibited in the preparatory phase of legislation concerning cable television. It should actually be of assistance in deliberating legislative policy. It has even become apparent from the radio and television committee's parliamentary bill concerning cable transmissions that it will only provide a basis for a broader clarification of the issue since as such it represented a rather narrow view connected with the interests of the Finnish Broadcasting Corporation.

Conservatives' Chairman Charges 'Censorship'

Helsinki HELSINGIN SANOMAT in Finnish 15 Apr 82 p 10

[Article: "Suominen Criticized Ministry: Ban on Satellite Experiment Is Censorship"]

[Text] Conservative Party Chairman Ilkka Suominen considers the Communications Ministry's interference in satellite transmissions to be an astonishing censorship measure.

The Communications Ministry has prohibited the Postal and Telecommunications Administration from conducting an experiment on the reception of satellite transmissions in Helsinki. Since the end of March the postal service has transmitted test programs originating in England to Helsinki Television's cable network.

The arguments by which participation in this experiment is prohibited are completely foreign to the concept of freedom of speech in a democratic society and have more to do with the ideological premises of the individual who proposed the ban, stated Suominen in Lohja on Wednesday.

According to Communications Minister Jarmo Wahlstrom (Communist), who is behind the ban on this experiment, the joint experiment of the postal service and Helsinki Television was not well thought-out since legislation concerning cable television operations has not yet been enacted.

Even though a bill is presently being prepared with respect to cable operations, this cannot be a justification for prohibiting satellite transmissions, stated Suominen. "In this instance we have now embarked upon a path according to which a state institution should always refrain from acquiring any kind of additional information and conducting experiments," continued the chairman of the Conservative Party.

Suominen urged the government's bourgeois parties to become involved in the restrictive attempts of the Ministry of Communications.

Firm Vows to Continue Transmissions

Helsinki HELSINGIN SANOMAT in Finnish 16 Apr 82 p 10

[Article: "Orbit of TV-Satellite Adjusted, Ban Will Not Stop Transmissions"]

[Text] The intent is to continue the television satellite broadcasts transmitted by Helsinki Television in spite of the negative stand of the Ministry of Communications. Communications Minister Jarmo Wahlstrom (Communist) prohibited the Postal and Telecommunications Administration from receiving satellite transmissions for Helsinki Television just before Easter.

Helsinki Television's satellite transmissions have been discontinued since last Friday. This is a result of the fact that the orbit of the OTS-satellite used for transmissions was adjusted 5 degrees over Easter.

"We will resume test transmissions on 20 April and the intent is to begin actual satellite programs on 26 April when programming broadcast by the English corporation will be 2 hours daily," assures Helsinki Television's Managin Director Heikki Saraste.

Helsinki Television's satellite programs are received by a 5-meter disc antenna leased from the Postal and Telecommunications Administration. However, on last Thursday the Ministry of Communications demanded that the postal service discontinue the satellite transmissions.

"We have an agreement with the Postal and Telecommunications Administration, the essence of which is that transmissions will continue as long as the present OTS-satellite remains operational or 1--2 years," states Managing Director Saraste.

Satisfied With Satellite Programming

According to Saraste viewers have been exceptionally satisfied with the sattellite programming. "There seems to be a real demand for English-language programming."

The Postal and Telecommunications Administration has not for the time being had time to take a stand on the ministry's ban. "We did not receive the letter from the ministry until Wednesday. I have assigned the task of finding various alternatives for resolving this issue, but immediate decisions must not be expected," states Director Pekka Tarjanne.

There is a 3-month period in which notice of cancellation can be given, and now it must be determined whether the agreement can be rescinded without having to pay any compensation to Helsinki Television.

"There is no mention of how an agreement would be rescinded in practice in the letter sent to the Postal and Teleccommunications Administration by the ministry. A decision was made to prohibit the satellite experiment for the reason that funds had not been allocated for it," states administrator Kai Tornblom of the Ministry of Communications.

Funds were requested for the satellite television experiment from allocations for the planning of a coastline channel. However, the ministry announced that the funds are to be used for improving Swedish-language programs in the coastal area.

Cable Television Law Needed First

In the opinion of Communications Minister Jarmo Wahlstrom it is not suitable to begin new forms of cable television at the same time that a new cable television law is being prepared.

Minister Wahlstrom disputes the fact that the initiative to suspend satellite television transmissions came from the Finnish Broadcasting Corporation. "Naturally, as a member of the advisory board of the Finnish Broadcasting Corporation I am familiar with the various points of view. The Finnish Broadcasting Corporation naturally opposes private cable television operations," states Minister Wahlstrom.

Resentment With Comparison to Operations of Finnish Broadcasting Corporation

The cable television report has encountered surprisingly stiff opposition. The report unanimously approved by the cable and television committee does not satisfy all those expressing an opinion, but except for two all the statements demand a revision of the bill.

The strongest resentment is expressed with respect to the comparison of cable television operations with those of the Finnish Broadcasting Corporation. Also the demand to include Finnish-language programming and the strict restrictions on advertising irritate those issuing statements.

According to the critics the radio and television committee has acted in accordance with the interests of the Finnish Broadcasting Corporation: the experts used are from the Finnish Broadcasting Corporation, the committee is crawling with members of the Finnish Broadcasting Corporation's advisory board, and the other politicians included in it have been persuaded to go along with the opinions of those members linked to the Finnish Broadcasting Corporation.

According to Kai Tornblom it seems quite exceptional that a report which has been subjected to a thorough parliamentary dicussion is criticized so severely. "However, what can be done when everyone in the committee was unanimous from the Communists to the Christians," states Tornblom in amazement.

Bill Will Be Ready in the Fall

According to Tornblom the discussion of the bill will in any event have to be conducted on the basis of the committee's proposal. The planning and enactment of the bill is further slowed down by the fact that the Ministry of Justice and the Interior Ministry have not yet made their own statements.

Tornblom promises that the bill will be ready by late summer at the latest when the government returns from its summer break. "The bill will be ready for the fall session of parliament."

The Communications Ministry received 16 statements on the radio and television committee's cable report. The majority of those issuing statements considers that cable television operations should be covered by legislation. Only the Cable Television League questions the necessity of the law in its entirety. According to the league cable television operations do not need special legislation.

The radio and television committee based its proposal on the fact that cable television operations are more similar to the operations of the Finnish Broadcasting Corporation than the press.

Principle of Press As Premise

The majority of those issuing statements considers that the committee made a basic error in the seletion of its premise. This activity is generally considered to be so close to the operational principles of the press that the premise should be a principle based on the model of the press.

The committee's view best serves the Finnish Broadcasting Corporation and the League of Journalists. On the other hand, the League of Periodicals, the League of Newspapers, the Marketing League, the League of Advertising Agencies, the Central Chamber of Commerce, and the Municipal League consider that cable television operations should be seen as more a part of the press than operations of the Finnish Broadcasting Corporation.

In appealing to national culture the committee demanded that 40 percent of cable television programming should be of domestic origin. Many of those making statements considered this demand to be completely unreasonable.

Also the committee's proposal that advertising can amount to only 7.5 percent of programming time at the most received considerable opposition.

Liberal Party Worried Over 'Freedom of Expresssion'

Helsinki HELSINGIN SANOMAT in Finnish 18 Apr 82 p 11

[Article: "Liberals Concerned About Freedom of Speech"]

[Text] The Liberal Peoples Party considers that the attempt of officials to prevent the experimental operation of cable television limits freedom of speech.

In the opinion of the party's executive council the attempts to alter the conditions of cancellation with respect to an agreement in a manner different than what was agreed upon between an employer and employee regardless of whether they exercised their right to join a labor market organization or not also demonstrated an alarming development to restrict basic civil rights.

The Liberal Peoples Party presuppoes that the government will revise the proposal made with respect to job security and conditions in such a way that the equality of the parties involved in working conditions will be guaranteed and unjustified cancellations of contracts will be effectively prevented. The party also urges the immediate extensive reform of basic rights.

Minister Wahlstrom Defends Stand

Helsinki HELSINGIN SANOMAT in Finnish 18 Apr 82 p 10

[Article: "TV Satellite Will Not Bring Additional Freedom of Speech"]

[Text] In the opinion of Communications Minister Jarmo Wahlstrom (Communist) what is most disheartening in the recent discussion on the tv satellite experiment has been that the defenders of this experiment have been hiding under the guise of protecting the freedom of speech.

In slightly scratching the surface it becomes apparent that the larger newspapers have built or are building their own cable television networks in the larger cities.

"This it is not a question of any individual's freedom of expression, but the freedom of the large newspapers to procure additional profits for their owners by means of new technology," states Wahlstrom.

According to him what is ironic in this is that in the United States, from where the rightwing readily accepts models, legislation has been enacted to prevent the establishment of just this kind of information monopoly which is now beginning to come into existence in Helsinki and is being formed in Turku and Tampere, for example.

In these areas the major newspapers are merely supporting their own economic and political interests and not the freedom of speech of individual citizens."

Wahlstrom points out that the parliamentary committee which reported on cable television operations was in principle completely unanimous with respect to the report on this matter. "It is natural that limits, which any nation finds to be reasonable, are placed on activities requiring large investments in which the individual has no opportunities. This is not at all a question of censorship."

In his opinion the new developments in mass communications will threaten our national identity and its individual traits if it is allowed to grow free and wild.

10576
CSO: 5500/2205

ARIANESPACE, AMERICAN SHUTTLE COMPETE ECONOMICALLY, TECHNICALLY

Paris AVIATION MAGAZINE INTERNATIONAL in French 1-14 Mar 82 pp 30-31

[Article by Jacques Tiziou: "Are Ariane and the Shuttle Competitive?]

> [Text] Ariane completed 1981 with a dual victory, although the successful development of the L-04, which ended the launcher's experimental stage, may not be the most important aspect. Successes with Western Union, Southern Pacific and General Telephone and Electronics are probably much more significant. In short, almost everywhere there is an increasing tendency to speak of competition between Ariane and the shuttle. Exactly what does this mean? Jacques Tiziou, our regular correspondent in Washington, explains ....

The successes which we have just mentioned support the choice of the European rocket for the launching of 5 satellites: 1 Westar, 2 Spacenets and 2 G-Stars, for American telecommunications giants. The American press, which has practically never mentioned Ariane, with the exception of specialized journals, has finally woke up, as have financial circles, which consider the three companies' decision to call on Europe to launch their satellites as an outright loss of $125 to $135 million for American space operations.

Some people say that the corporations have quietly dropped their country and the space program which American taxpayers have financed, and just when U.S. launching facilities could be rendered profitable to a good extent. They compare this attitude to that of motorists who choose to purchase small Japanese cars when Detroit is going bankrupt.

Meeting Needs

American telecommunications "giants" reply that they are going through a period of keener competition, that they must be able to offer their customers the best prices and, therefore, be able themselves to take advantage of the best prices. They say that Ariane costs just under $20 million per satellite (for a double launching), or 20 percent less than the Delta rocket.

Yes, the Delta! They don't even mention the space shuttle, since all of the 72 operational launchings scheduled between November of this year and September 1987 have already been reserved. There are still options in some cases, but as long as an option has not been withdrawn, NASA can hardly release the tiniest space.

These 72 launchings within 5 years should make it possible to put into orbit about 100 payloads, ranging from small telecommunications satellites weighing about 1 ton to Spacelab-type laboratories, not to mention a multitude of small "get-away specials" weighing several tens or hundreds of kilograms. It is impossible to tell the exact number of satellites that will be launched during this period, since some missions will be entirely military and also since the Pentagon has been careful not to specify whether 1 or 10 satellites will be put into orbit during a particular mission.

The American space agency has long known that the shuttle bays would be quickly filled, even though they are almost large enough to hold an Ariane first stage (nearly 40 cm in size) and even though the orbitable mass is 30 tons for each flight, or 35 tons after all improvements have been made, which is 5 times more than the Ariane 4. This does not mean that it will be possible to launch 5 satellites in a geostationary orbit from the bay of the shuttle. Because of the upper stages, space is still limited and the maximum number will be four. And such a mission will not take place before the STS-29 mission which Columbia must make in June 1985. This will be a 5-day mission with a 4-man crew and should make it possible to launch Telstar 3-D, RCA-H, G-Star C and Syncom IV-3 satellites.

Competitive in Some Cases

Most of the time, the shuttles will carry only 2 satellites to be put into a geostationary orbit, or sometimes 3, and from this standpoint it can definitely be said that the space shuttle will be in competition with the European rocket. Such competition is welcome, according to NASA, where they know too well that budgetary sources will dry up without competition. But is it really possible to speak of competition, they ask us, since we can hardly accept any new customers between now and 1988 and since we have been obliged to step up the production of Centaur and especially Delta rockets in order to meet future needs, particularly with regard to this dramatic increase in telecommunications satellites.

McDonnell-Douglas says that Delta costs what it costs and does not receive U.S. Government subsidies. "Of course we lose money every time that Ariane obtains a customer. But we don't have the means to combat commercial practices at the government level. We can only exploit our launcher's 22-year history, its 93-percent reliability since 1960 and 96 percent since 1975, and point out that this is based on 160 launchings."

Ariane's other competitor is the Atlas-Centaur rocket manufactured by General Dynamics. It has also been affected by the impact of the European rocket, which will provide one-half of the launchings of Intelsat V satellites. But from NASA's viewpoint, it is also only an alternative solution, from the standpoint of demand, until 4 shuttles are in service and 2 missions are possible every month in 1988 (there will be 17 in 1986 and 17 in 1987) and until it is finally possible to satisfy such demand.

Doubled Prices?

There is still the problem of determining the price. Between now and 1986, a "customer" can have a satellite launched by the shuttle for "only" about $10 million. But NASA will soon have to adjust its rates and no one will be surprised if these rates double. Promotional rates are not forever and this will perhaps be the case as well for Ariane between now and when it is put into service, in early 1986 at the soonest.

But shuttle officials, at least officially, display hardly any concern, saying often that they do not consider the problem of competition between Ariane and the shuttle to be real, rather that it is a European invention; they even point out that Ariane is coming to their aid, since they cannot meet the demand, and that the shuttle is a multipurpose vehicle, a vehicle that is piloted and reusable from one launching to the next, a device which is not only capable of placing a 30-ton spy satellite or components of permanent orbiting space stations into orbit, but also of repairing damaged satellites in orbit, and especially bringing them back to earth so that they can be restored to proper working condition and relaunched, which will be the case of the SMM [expansion unknown] by late 1983.

In the longer term, also according to shuttle program officials, telecommunications satellites will no longer weigh 3 tons but 10 and the shuttle will not need to grow. Malicious gossips (they also exist in the United States) add that by the end of the decade, Ariane will have finished growing while the shuttle will only be reaching its puberty. Such gossips also state that only what is comparable should be compared and that Jacks of all trades cannot be compared with ultraskilled workers.

But this is an American version of the situation. This attitude does not prevent NASA and the U.S. Air Force from seriously considering the development of pilotless launchers derived from the shuttle's powder boosters, as powerful as the shuttle but less expensive than Ariane, in terms of the price of putting 1 kilogram into orbit. More than a question of big money, it is a matter of honor and principle. The Americans have difficulty acknowledging that equal or superior technology could come from abroad.

This is not yet true in the case of the space shuttle, but this was not the case either when the Japanese started to invade the U.S. automobile market. The situation could change greatly if management of the shuttle's operational flights were assigned to an industrial corporation, even more if assigned to a commercial corporation. NASA excels in research and testing, which has always been its mission. And the Office of Management and Budget, the OMB, will do well to learn a lesson from old Europe and encourage the creation of a kind of American Arianespace Corporation. That is when competition could really start.

11915
CSO: 5500/2158

BRIEFS

ERICSSON SUPPLYING MOBILE-PHONE SYSTEM--SRA/Ericsson has been asked to construct a nationwide mobile-phone system in the Netherlands. The first phase of the order amounts to 50 million kronor, but that is for the base station alone. Construction of the system will follow, at which time the order will be greater. SRA/Ericsson, which is part of the Ericsson group, was chosen by the Dutch telecommunications authorities after competition with the Philips Co. of the Netherlands and Motorola of the United States. The order is for 45 base stations with a total of 670 channels and an AXE station. It is expected that the system will be expanded to 1,500 to 2,000 channels for a final capacity of 50,000 mobile units. When these 50,000 mobile units are constructed the order will become greater than 50 million. Marianne Laurell of SRA/Ericsson was asked if this would affect employment in Sweden. "Yes, in the long run it will," she said. "The units will be manufactured at our Kumla plant. In addition, this order is strategically important, since many telephone companies both in and outside Europe are planning or considering similar systems. [Text] [Stockholm SVENSKA DAGBLADET in Swedish 10 Apr 82 p 19] 9336

CSO: 5500/2202

BILL ON NORDIC SATELLITE SYSTEM APPEARS TO FIT TELE-X

Stockholm SVENSKA DAGBLADET in Swedish 4 Apr 82 p 7

[Article by Bjorn F. Hansen]

[Text] Education Minister Jan-Erik Wikstrom denied every request from Swedish Television with regard to the use of the Tele-X satellite.

This occurred in a proposal for Nordic cultural cooperation presented by him to parliament on Friday. In the TV portion of the satellite program, Tele-X and its successor, the permanent Nordsat satellite system, should be used exclusively for transmitting programs within the Nordic countries, according to the education minister.

According to the proposal, the Nordsat system would be changed so that it would be more and more like Tele-X. This latter satellite would be used, among other things, for data transmission and experiments. Its successor, the Nordsat system, would serve the same functions.

There can be no regular programing until both Tele-X and the first satellite in the permanent system are in space. Regular broadcasts, which are of interest to the public, cannot be expected before 1989.

Own Model

Swedish Television had hoped for a completely different model. One of the TV channels would be a joint Nordic channel. TV chief Sam Nilsson, along with his counterparts in Helsinki and Oslo, have begun discussions on how the channel should be used. Swedish Television wants to use the other channel itself, possibly for pay TV.

"Swedish Television has anticipated events. It seems to have decided on a model to follow, but without consulting our ministry or parliament," ministry secretary Bjarne Kirsebom said.

No New Production

According to Wikstrom's proposal Sweden, Finland, and Norway would have one satellite channel each. TV 1 and TV 2 would share the Swedish channel and regular programing would be transmitted to the neighboring countries. There would be no original programming for this channel.

The original Nordsat has been altered to such a degree that insiders believe its name should be changed. Perhaps "Nordkom" (Nordic Communications) would be a better name.

TV chief Sam Nilsson was not available for comment on Friday evening.

9336
CSO: 5500/2202

MISSION, FUNCTION OF TELE-X SATELLITE DESCRIBED

Stockholm DAGENS NYHETER in Swedish 17 Apr 82 p 12

[Article by Roland Gyllander]

[Text] In several years when Sweden enters the space age with its own satellites, they will literally cover the earth. In spring 1984, a Viking research satellite will be put into orbit around the earth's poles. Two years later the data and TV satellite Tele-X will assume an orbit perpendicular to that of Viking--around the equator, where it will act as a telecommunications satellite.

Somewhat like a winged chest of drawers, in several years Tele-X will hover above the equator at 36,000 km with its transmitting and receiving antennas carefully directed toward the Nordic countries. This is the Swedish-Norwegian-Finnish telecommunications satellite that has been developed in the shadow of the constant quarreling over Nordsat.

Anywhere in the Nordic coverage area a small parabolic antenna may send a message--data signals, dititized telephone or facsimile signals--in the form of a radio wave to the satellite hovering invisibly in the southern sky, just above the horizon.

Another radio wave returns immediately from the satellite with the same message which may be received with a similar antenna somewhere else within the coverage area.

It is almost like bouncing a message off a mirror high in the sky instead of sending it along telecommunications lines.

It will be extremely simple from a consumer standpoint, almost like dialing a computer service on the telephone. The satellite will handle up to 500 transmissions simultaneously.

Elephant Ears

The trend in telecommunications satellites is toward larger and heavier satellites and this is also clear from Tele-X. It will be large, weighing

2 tons and 4.5 m high including the antenna tower. The solar panels, which will be extended in the strong sunlight of space like two elephant ears, have a total span of 19 m. They will deliver 3 kW electric power, primarily to the many transmitting tubes of the satellite.

The larger the satellites are, the greater their transmitting power and, thus, the smaller and less expensive the terminals on earth need to be. Tele-X is specially designed for tests involving the rapid transmission of data for computers as well as telex, telephony, facsimile, etc. Wave propagation experiments and direct TV tests will also be made. The satellite has two TV channels for direct transmission to homes and may be used as a kind of reduced Nordsat.

Video Conference

It can also be used for video conferences if the participants remember not to speak at the same time. Otherwise, the same type of blocking effects could occur that occur in lively satellite telephone conversations. Since the signal must travel 36,000 km into space and then back again, there is a delay of several tenths of a second. You do not see and hear what the other person is saying, but what he or she just said.

According to plans, Tele-X will be launched from Kourou in French Guyana by the European Ariane 2 rocket. Once it is in orbit around the earth, it will direct its antennas toward earth. It has infrared sensors that distinguish between the warm earth and cold space.

Fine adjustment of the transmitting antenna toward the Nordic coverage area is extremely important. It must be made within 1/500 of a degree for the satellite's capacity to be best utilized. It will seek a transmitter on earth (in Kiruna) that will send up a control signal.

Slave Connected

The satellite's receiving antenna is "slave connected" to the transmitting antenna and is directed automatically to the same area. It is then ready to receive signals from earth, amplify them, and send them back.

The parabolic antennas at stations on earth need not be directed so carefully, but may be bolted in place permanently on the roof of the customers. Their radio waves are so broad that they cover the satellite even when it drifts slightly in the southern sky.

And the satellite will drift. A geostationary satellite does not stay still, regardless of how carefully it is placed at the right velocity, at the right altitude, and in the right position above the equator.

First of all, the earth's gravitational field (force of attraction) is different in different places. There are several points around the equator toward which satellites are attracted--the strongest is the gravitational depression below the sea south of Ceylon.

Secondly, the sun and moon tend to attract the satellite in a north-south direction.

Autoignition

For this reason, it is equipped with small jets that occasionally push it back into place. Over 100 kg fuel is on board--nitrogen tetroxide and monomethylhydrazine, which ignite when mixed in the combustion chamber of the rocket. These substances have good storage properties, which are needed since the satellite's estimated lifetime is about 5 years.

Both the satellite and ground equipment will be developed and manufactured by Nordic companies in cooperation with West German and French industry. In Sweden Saab-Scania and LM Ericsson are primarily involved.

An important aspect of the project is gaining experience for Swedish industry in large and ultramodern communications systems. The project will cost a total of 1.25 billion kronor, of which Sweden will be responsible for 800 million.

Hammer Thrower

In several years when the Swedish space research satellite Viking is hovering above the North and South poles in an orbit up to 15,000 km, it probably will look something like an unusually hesitant hammer thrower.

The satellite will roll along on edge like a cake pan swinging four metal balls around it on 40 meter long lines. This is an antenna system for measuring field strengths and waves in the plasma surrounding the earth at high altitudes.

Viking's task is to investigate the magnetosphere at altitudes between 4,000 and 15,000 km. In this region there is a complicated interplay between warm and cold plasmas, i.e. thin ionized gases that move in the earth's magnetic field. The secrets of the northern lights are hidden here, perhaps along with the causes of the weather and climate on earth.

Compared to the gigantic Tele-X, Viking is a modest piece of equipment. It looks like an octagonal cake pan 0.5 m high, 2 m in diameter, with eight sides covered with solar panels to supply electricity. Once in orbit, it will look quite straggly with all 10 antennas and instrument arms sticking out in all directions.

In the beginning, it will weigh about 0.5 tons, but almost half of this is fuel for the rocket that will hurl it into its final, highly elliptical orbit. the highest point of which is greater than the earth's diameter.

Viking will be launched in May 1984 along with the French remote analysis satellite Spot which will be placed into orbit over the poles at an altitude of 800 km.

Stable

Later the carrier rocket will release Viking, but only after it is given a spinning motion that stabilizes it in space similar to the motion of a gyroscope. On the edges of Viking are small spin rockets aimed to the sides for increasing the rotation to almost 1 revolution per second.

This will give the satellite the necessary stability when its own large rocket engine is ignited, launching it into its enormous orbit, 18 times higher than Spot.

Once the satellite is in the proper orbit, the same spin rockets will slow the rotation again so that all arms and antennas can be extended and the satellite can make contact with its ground station, the Esrange Base in Kiruna, for the first time.

The "hammers" mentioned above are then drawn out by centrifugal force as the satellite rotates. The rotation then becomes slower, for the same reason (conservation of momentum) that a whirling ice skater spins more slowly as she stretches out her arms.

When the "hammers" are completely extended, the rotation of the satellite is extremely slow--3 revolutions per minute. The rotation is controlled by electromagnetic coils in the satellite. When current of varying direction and strength passes through these coils, the entire satellite turns in the earth's magnetic field, just like the rotor turns in an electric motor.

Remotely Controlled

With this mechanism, remotely controlled by radio from earth, not only can the rotation be increased or decreased, but the entire satellite may be turned laterally.

It will be like turning an unwieldy, 80 m high flywheel a half rotation laterally--a process that will take 50 days.

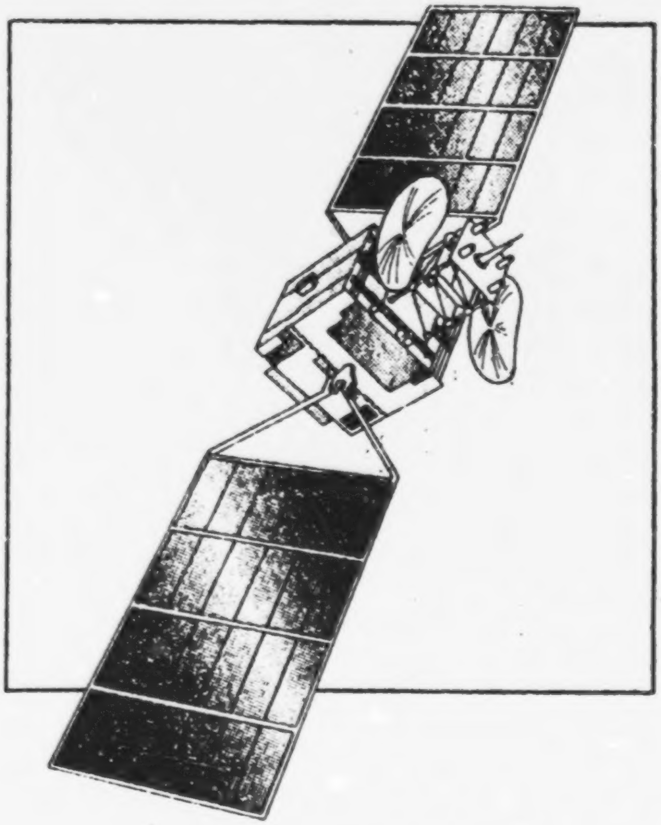
It must be done after about 4 months, however, for by that time the earth and the satellite in their common orbit around the sun will be in such a position that the sun would shine directly on the satellite's sensitive instruments, all of which are on one side--the top side of the "cake pan." After the turn the instruments will be safely in the shade again for the remainder of the satellite's lifetime--an additional 4 months.

Northern Lights

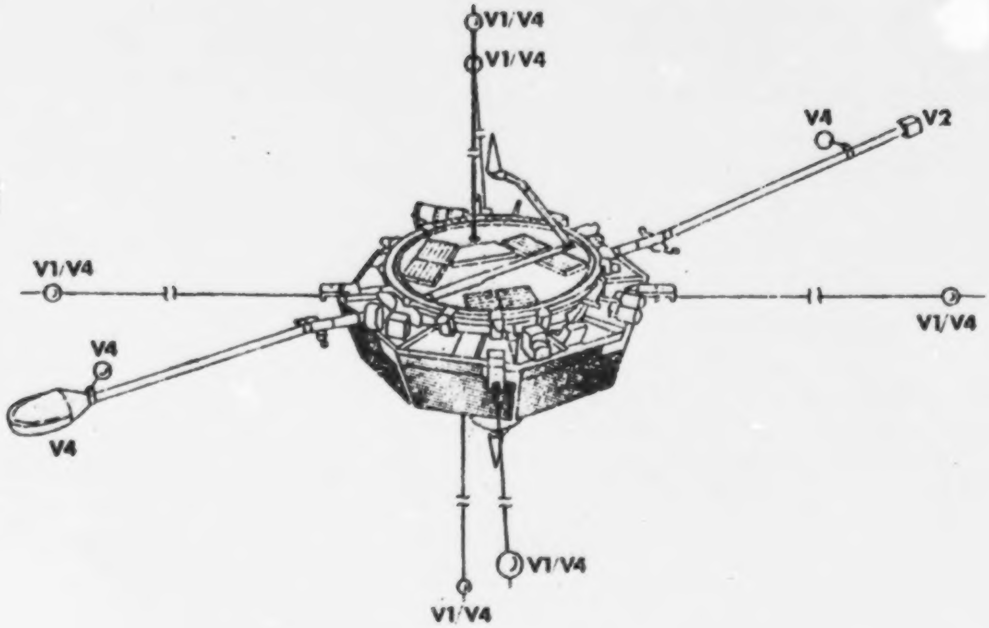
The instruments will measure the electric and magnetic fields, as well as waves and particles. There is also a "camera" that will take pictures of ultraviolet light in the northern lights, which from this height look like an oval halo of light over the earth.

The "hammers" farthest out on the slowly rotating lines actually are sensors for measuring potential differences between two points up to 80 m apart.

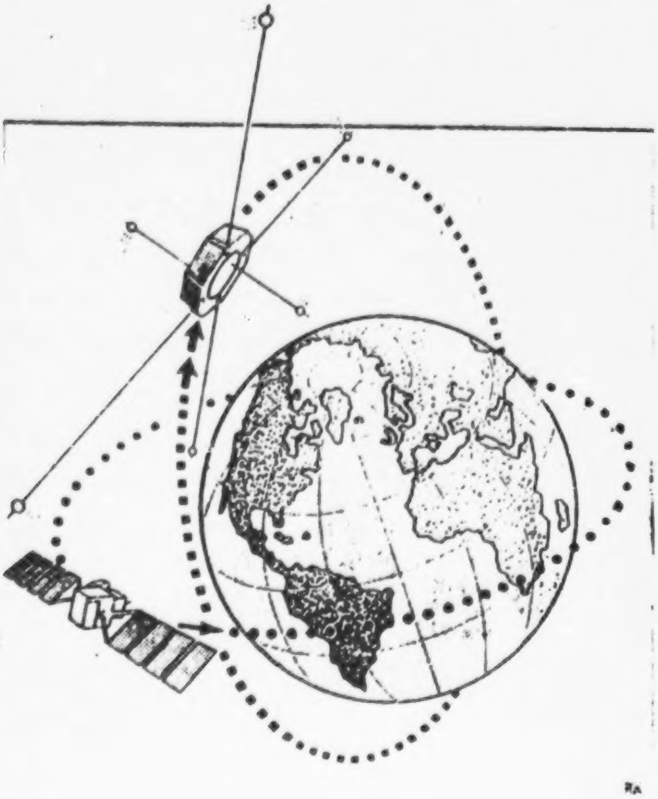
All data, 7,000 measurements per second, is sent in digital form by radio to Esrange in Kiruna, which is project headquarters on earth. Swedish, American, and Canadian researchers are involved in the experiment. The cost is estimated at 106 million kronor.



The Tele-X satellite is dominated by the large solar panels. The two oval plates are the transmitting and receiving antennas.



Antennas and arms stick out in all directions from the Viking satellite for measuring the thin plasma of the magnetosphere. V1 and V4 stand for measurements of electrical fields and waves and V2 is for magnetic measurements. The satellite is surrounded by eight solar panels and the ring on the upper side contains three "vents" for allowing heat to escape from the inside of the satellite.



Swedish satellites in north-south and east-west orbits around the earth in several years are shown here. Viking, with its long sensors, is in orbit over the poles and Tele-X is "still" in a so-called geosynchronous orbit high above the equator.

9336
CSO: 5500/2202

END

JPRS 80958

2 June 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 220

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 80958

2 June 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 220

CONTENTS

WORLDWIDE AFFAIRS

Nicaragua To Join Sputnik Communications System
(Managua Domestic Service, 20 May 82) 1

Briefs
Angola, Cuba Radio, TV Agreement 2
India, GDR Exchange Agreement 2

ASIA

BANGLADESH

Adviser Visits Communications Equipment Factory
(THE BANGLADESH OBSERVER, 6 May 82) 3

Briefs
Phone Exchanges Completion Date 5

INDIA

Successful Tests on New Satellite Reported
(THE TIMES OF INDIA, various dates) 6

Radio and Television Networking
Earth's Image Beamed

Editorial Tells Benefits of New Satellite
(Editorial; THE HINDU, 24 Apr 82) 9

Panel Favors PTI for International News Coverage
(THE TIMES OF INDIA, 29 Apr 82) 11

Next Generation Satellites in Preparation
(THE STATESMAN, 5 May 82) 12

Communications Equipment Production Plans Reported
(PATRIOT, 29 Apr 82) 13

Commission Proposes Greater Role for Press Council
(THE TIMES OF INDIA, 28 Apr 82) 14

Briefs
Overseas Telecommunications 15
Hindu News Service 15
Satellite 'In Fine Shape' 15

MONGOLIA

Briefs
Television Development 16

PAKISTAN

Briefs
Baluchistan Telecommunications Projects 17

PEOPLE'S REPUBLIC OF CHINA

Yin Fatang at Xizang Telecommunications Meeting
(Xizang Regional Service, 22 Apr 82) 18

Briefs
Broadcast Stations 19

SRI LANKA

Nationwide Television Network Soon
(B. C. Perera; THE ISLAND, 3 May 82) 20

Microwave Link Between Colombo-Madras
(DAILY NEWS, 4 May 82) 21

Plan To Improve Telephone System
(DAILY NEWS, 5 May 82) 22

VIETNAM

New Postal, Telegraph Projects, Products Completed
(Nguyen Doan; QUAN DOI NHAN DAN, 6 Apr 82) 23

Signal, Liaison Main Station Constructed, Placed Into Operation
(NHAN DAN, 5 Apr 82) 25

Briefs
Ben Tre Wired Radio Stations 26

EAST EUROPE

CZECHOSLOVAKIA

'PRAVDA' Notes CSSR Role in Intercosmos Program
(I. Biryukov; PRAVDA, 27 Apr 82) 27

LATIN AMERICA

CUBA

Briefs
New Matanzas Telephone Central 28

NEAR EAST AND NORTH AFRICA

IRAN

Musavi Inaugurates New Television Transmitter
(Tehran Domestic Service, 20 May 82) 29

Briefs
Direct Telecommunications Links 30

UNITED ARAB EMIRATES

Briefs
New TV Channel 31

SUB-SAHARAN AFRICA

MALI

FRG Mediumwave Transmitter Turned Over to Radio Mali
(L'ESSOR, 6-7 Mar 82) 32

MOZAMBIQUE

Briefs
Experimental Telex Operation 34
Radio Short-Circuit 34

NIGERIA

Briefs
Solar Energy for Telecommunications 35

SOUTH AFRICA

Briefs
TV Expansion 36

USSR

USSR Satellite Communications Described
(G. Markelov, M. Fedorov; PRAVDA, 3 May 82) 37

Briefs
New Kazakhstan TV Relay Station 60

WEST EUROPE

SWEDEN

Fiber Optics Introduced Into Swedish Telephone Network
(Miki Agerberg; NY TEKNIK, 18 Mar 82) 41

UNITED KINGDOM

Briefs
World Record in Fiber Optics 43

NICARAGUA TO JOIN SPUTNIK COMMUNICATIONS SYSTEM

PA201718 Managua Domestic Service in Spanish 000 GMT 20 May 82

[Text] (Marne Serrano), development director of Nicaraguan Telecommunications and Postal Services, TELCOR, has reported that Nicaragua will make a grand entrance into the space age through a plan to join the Sputnik satellite system. The telephone communications network to Latin America and the rest of the world will be expanded by using the Sputnik satellite system, which the USSR has been developing during the last 20 years. (Serrano) added that the project comes under the agreements signed by Commander Daniel Ortega, coordinator of the government junta, during this recent visit to the USSR. He said that we will be able to communicate more easily with the European socialist countries, as well as with Africa and Asia, through the inter-Sputnik system and that Nicaragua will become a leader in Latin America in the field of communications.

This will be a giant step in Nicaragua's history because we will jump from animal and waterborne transportation, which is still used by the inhabitants of our country, to the use of ultramodern communications technology. We will be able to cross the Atlantic and Pacific oceans in a matter of seconds to relay reports and communicate with [words indistinct], he said. Soviet technicians will be arriving in Nicaragua next month to set the plan into motion. The inter-Sputnik landbased station will be located at the Nejapa lagoon and will begin operations in late 1983.

CSO: 5500/2236

BRIEFS

ANGOLA, CUBA RADIO, TV AGREEMENT--Luanda, 1 May (ANGOP)--The People's Republic of Angola and the Republic of Cuba signed a cooperation agreement in Luanda on Friday. In accordance with the agreement, the two countries will exchange political, cultural and socioeconomic programs. This accord, signed for Angola by Rui de Carvalho and Eugienio Romulo, directors general of the national radio and the Angolan People's Television, respectively, and for Cuba by Jose Ridrigues Iisnoras, vice president of the Cuban Institute for Radio and Television, is aimed at broadening the knowledge and informative capabilities of the Angolan and Cuban peoples. It becomes effective in 1983. Miguel de Carvalho (Wadijimbi), director of the Department of Information and Propaganda of the MPLA-Labor Party's Central Committee, was present at the ceremony. [Text] [AB011245 Luanda ANGOP in French 1140 GMT 1 May 82]

INDIA, GDR EXCHANGE AGREEMENT--India and the German Democratic Republic are to exchange information on the preparation of 5-year and annual plans. They will also exchange their experiences in manpower planning, industry and agriculture. Under an agreement signed in Berlin, the two countries will also exchange information on the application of electronic data processing. [Text] [Delhi Domestic Service in English 0240 GMT 25 Apr 82 BK]

CSO: 5500/2232

ADVISER VISITS COMMUNICATIONS EQUIPMENT FACTORY

Dacca THE BANGLADESH OBSERVER in English 6 May 82 pp 1, 8

[Text] Rear Admiral Mahbub Ali Khan, Deputy Chief Martial Law Administrator and Adviser for Ministry of Communication on Wednesday asked the Research and Development Wing of the Telephone Shilpa Sangstha to prepare a plan with concrete suggestions for the improvement and innovations in the present production system says a PID handout.

He also directed them to make necessary blueprint for electronic switching system for future use in the country.

The DCMLA and Adviser visited the Telephone Shilpa Sangstha on Wednesday and reviewed the workings of the Sangstha in a meeting with the Managing Director and other officials.

He foresaw that even if electronic system is introduced the factory will be the Centre of production and development of the new system without any loss of employment to the present workers, since very few items of production will need to be changed.

The Adviser found quite a good number of females and blind personnel employed by the TSS. He asked the management to employ still larger number of female workers as the type of job is better suited to their temperament. He also asked them to increase the pay and emoluments of blind workers.

The Telephone Shilpa Sangstha which employs about 1100 personnel, is engaged in manufacturing telephone line units, telephone sets and components of telephone exchange for the country. The target for production of telephone sets and line units for the current financial year are 17000 sets and 11,000 line units of which 13,512 sets and 8200 line units have already been produced till the end of April last. It may be mentioned here that 70 per cent of the equipment are made or processed locally and only 30 percent are imported.

The adviser was pleased to know that production efficiency of the TSS work force was on average 116 per cent during the financial year of 1980-81. He was also pleased to know that there exists incentive premium system to ensure high productivity of international standard and quality.

The TSS is also processing an export order worth Taka 10 lakh. The first consignment of equipment is now ready for shipment to West Germany. So far out of 1.04,000 line units produced by TSS about 80,000 line units have been installed in different exchanges in the country and another 14000 lines are under installation.

The DCMLA asked the TSS management to undertake the construction work of workers' housing complex as the land for the purpose had already been acquired. He assured all necessary government assistances in balancing and modernising of the factory as it requires to play a very significant role in providing telecommunication facilities to the rural areas, the development of which is the priority of the present government.

Earlier, on his arrival at the Telephone Shilpa Sangstha, the DCMLA was taken round the various sections of the factory by the managing director of the Sangstha.

CSO: 5500/7138

BRIEFS

PHONE EXCHANGES COMPLETION DATE--The DCMLA and Adviser for Ministry of Communication Rear Admiral Mahboob Ali Khan has directed the Telegraph and Telephone board to expedite expansion of telephone facilities all over the country. He has laid down time table for completion of the following seven telephone exchanges as follows: Nilkhet exchange with 10,000 lines--December 16, 1982; Gulshan exchange with 2,000 lines--December 15, 1982; Mongla exchange with 400 lines--May 30, 1982; Mowlavibazar exchange with 400 lines--May 7, 1982; Sreemangal exchange with 400 lines--December 1, 1982; Mymensingh exchange with 1000 lines--July 1, 1982 and Saidpur exchange with 600 lines--August 1, 1982. The DCMLA has also directed the T&T Board to ensure speedier and effective repairs and maintenance of existing telephone lines of Dacca and other metropolis which have lately been deteriorated. He has asked them to strengthen the complaint and enquiry team in each exchange and to arrange special squad to work round the clock to rectify defective telephones. The new 2000 lines automatic telephone exchange (PABX) now being installed at the Bangladesh Secretariat for the exclusive use of the different ministries and offices of the government is expected to be commissioned by the middle of next month. When commissioned it will help spare about 1700 lines from Mogbazar exchange for use by public. The T&T Board has also taken up a programme to provide nationwide dialing system by the end of next year. [Text] [Dacca THE NEW NATION in English 30 Apr 82 pp 1, 8]

CSO: 5500/7137

SUCCESSFUL TESTS ON NEW SATELLITE REPORTED

Radio and Television Networking

Bombay THE TIMES OF INDIA in English 25 Apr 82 p 1

[Text] Bangalore, April 24 (UNI). Indian space scientists today confirmed the functioning of the telecommunications, and radio and television networking service payloads of the country's first operational multipurpose satellite, INSAT-1A.

The Indian Space Research Organisation announced here that its master control facility (MCF) at Hassan had successfully confirmed the functioning of ten of the 12 telecommunications transponders and one of the two TV broadcast transponders.

The third payload of the satellite, the very high resolution radiometer (VHRR) instrument, to be used for meteorology is still to be tested.

INSAT-1A, the first of the two multipurpose satellites, represents the country's first step towards implementing operational space systems for identified socioeconomic objectives and national requirements. INSAT-1B is expected to be launched in July next year.

Solar Sail Snag

INSAT-1A, which was plagued by problems ever since its launch is now rid of all major snags and but for a stuck solar sail, used to balance it in space, is expected to be ready for operation by mid-May.

The ISRO announced here that the functioning of the No 1 TV broadcast transponder was confirmed by transmitting a colour TV test pattern at 1230 hours IST.

The colour TV test pattern was transmitted to the spacecraft from the MCF at 6GHZ and received also at MCF at 2.5 GHZ. The transponder was kept on for about four hours.

The ISRO said radio frequency testing of transponders on board INSAT-1A was continuing and all 12 telecommunications transponders were now on. Testing had confirmed the functioning of ten of the 12 transponders.

The release said the MCF mission control team also successfully transmitted through the ultra high frequency (400 MHz) C-band data relay transponder. Further radio frequency testing of the transponder was continuing as part of the overall spacecraft on-orbit performance checkout preparatory to getting the spacecraft ready for operational use. Formal on-orbit performance checkout testing will commence next week.

Earth's Image Beamed

Bombay THE TIMES OF INDIA in English 26 Apr 82 p 1

[Text] Bangalore, April 25. The mission team at the master control facility (MCF) at Hassam in Karnataka has verified the functioning of the visible channel of the very high resolution radiometer (VHRR).

The first image of the earth's full disc was received at 1 p.m. today from the meteorological earth imaging instrument aboard INSAT-1A. Subsequently, the VHRR was commanded to generate six sector scans.

Preparations are now on to test the working of the infrared channel of the VHRR instrument.

UNI adds: Now all is set for a formal on-orbit performance checkout of INSAT-1A with the beaming of the image by the VHRR instrument.

Once the on-orbit performance checkout is over, next week the satellite would be ready for being declared operational by mid-May, the Indian Space Research Organisation said here today.

Indian space scientists have already confirmed the functioning of the telecommunications and radio and television networking service payloads of the triple function satellite. The satellite is to start radio networking in June and telecasting of programmes from August 15.

Today's manoeuvre by the Hassan mission control team to successfully command the satellite to generate the image of the earth's full disc through the visible channel of the VHRR instrument is very significant in view of the stuck solar sail. The sail is to be used for offsetting solar pressure on the asymmetrical solar array, the main source of power generation for the satellite and thus keep it balanced in space.

The VHRR mission of the system requires the spacecraft to be held precisely during frame imaging as well as between frames. However, despite the solar sail problem, space scientists have been able to command the satellite to generate the image of earth's disc in the visible channel.

INSAT-1A is the first at the two first generation satellites to continue the Indian National Satellite system. Together they will handle 8000 long-distance telephone calls, broadcast Radio and TV programmes and send half-hourly weather data.

The Hassan MCF has already tested successfully the working of the ultra-high frequency C-band data relay transponder for relay of meteorological, hydrological and oceanographic data from unattended land and ocean-based data collection-cum-transmission platforms. The working of the C-band antenna, the ear of the satellite and the C/S band transmit antenna have been confirmed with the transmission and receipt of colour TV signals on April 23.

CSO: 5500/7128

EDITORIAL TELLS BENEFITS OF NEW SATELLITE

Madras THE HINDU in English 24 Apr 82 p 8

[Editorial: "Taking the Best Out of INSAT"]

[Text]

FOR A WHILE it looked as if India's first full-fledged telecommunications satellite, INSAT-1A, launched from Cape Kennedy in the United States on April 10, would turn out to be a cripple. Some commentators had written off the enterprise; the vital C-Band antenna had failed to open out and there was fear about the failure of the immensely prestigious and expensive undertaking. Well, after more than 10 days of tension, the major snags have been set right — the 1150-kg. satellite has moved into its final geostationary slot and the essential transmitter system triggered into operating position by long-distance commands from the Master Control Facility at Hassan, in Karnataka. Because of the shroud of secrecy placed over the space shot and the subsequent manoeuvres, it is not clear where matters initially went wrong. Anyway, Indian and American scientists merit cheers for working hand in hand to make the delicate venture successful. There is still a snag in the solar sail but this appears to be a trifle compared to the technical problems that have been overcome.

Apart from the small-sized Rohinis launched from Sriharikota by Indian rockets, Bhaskara I and II and Aryabhata were shot into space from Soviet launching pads. APPLE, the partially experimental communications satellite, used the Ariane rocket developed by the European Economic Community. INSAT-1A was launched by an expendable Delta vehicle and INSAT-1B is slated to be hurled into position in the latter half of 1983 by the American space shuttle. INSAT-1A is the first civilian operational geostationary satellite system to combine telecommunications, television and radio broadcasting, meteorological imaging and data relay functions. This spacecraft is the primary unit and the one to follow will be used as a back-up and will provide additional telecommunication link capacity. Even without its own satellites, India is not an amateur in space applications programmes. An internationally applauded project was the Satellite Instructional Television Experiment — SITE — conducted in 1974-75 by the Indian Space Research Organisation along with the Ministry of Information and Broadcasting and the National Aeronautics and Space Administration, U.S., using the American satellite, ATS-6. This involved the deployment of 2,500 community television sets in six backward areas in Rajasthan, Madhya Pradesh, Andhra Pradesh, Karnataka, Orissa and Bihar. The second was STEP — the satellite telecommunications experiment project — in 1976-78 using the Franco-German Symphonie. A notable feature of STEP was the relay of cricket matches which India played in Pakistan. It was the evaluation of the SITE and the STEP experiments that led to the Government of India going in for the INSAT programme. Incidentally, unlike as in the nuclear research programme, cooperation in space experiments has been readily forthcoming from the Russians, the West Europeans and the Americans.

Now that INSAT is all set to function in the next few weeks, what are the services it will supply? The telecommunications component will provide 8,000 two-way long-distance telephone circuits potentially accessible from any part of the country. The metereological component will provide round the clock, half hourly observations of the weather sea surface and cloud-top temperatures and snow cover — in addition to early warnings of impending disasters like cyclones and floods. The third component is set to provide direct TV broadcasting to special community receivers and for nationwide coverage in one step. The P & T Department is to establish 31 earth stations, 28 fixed and three transportable, to make use on the ground of the spacecraft's capabilities. Already seven stations are in use with space-segment capacity leased from INTELSTAT. The Oil and Natural Gas Commission is setting up its own facilities for use in the offshore exploration areas. For those who may frown at the cost of the satellite, the meteorological package alone is capable of giving such huge benefits to the nation's agriculture-dependent economy as to defray the expenses. The life span of the satellite is cited as seven years on the basis that all components perform in tune with the design and the initial projections are to make the satellite pay for itself in four years. It is true that the ground facilities already established are not equipped to make full use of INSAT. It is not possible to tailor demand and supply to perfection in such a sophisticated field. Alignments will take time especially since this is a launch into a new telecom society. The ethos for progress has to be different in that the telephone connection and the TV aerial should no longer be status symbols.

CSO: 5500/7130

PANEL FAVORS PTI FOR INTERNATIONAL NEWS COVERAGE

Bombay THE TIMES OF INDIA in English 29 Apr 82 p 9

[Text]

NEW DELHI, April 28 (PTI).

THE Press Trust of India, which is ahead of other Indian news agencies in international news coverage, "is the obvious choice" for expansion of operations abroad, the second press commission has said in its report now under consideration of the government of India.

Explaining the rationale behind its recommendation in this regard, the commission has pointed out that the cost of maintaining Indian correspondents abroad, of their travel within the country and the region assigned to them, and the cost of transmission are so high that no Indian news agency can finance its foreign operations from its own revenues, including revenue from the sale of its news service abroad. Assistance from the government on a substantial scale is, therefore, inescapable.

AMERICAN EXAMPLE

"Given the constraint of the country's resources of foreign exchange, it is evident that it will not be possible for the government to assist more than one agency to expand the number of bureaux abroad for the collection and dissemination of news.

"Even among the developed countries, it is only in the case of the U.S. that there are two international news agencies—and one of them is in the financial doldrums. It is unnecessary and will be imprudent for India to emulate the U.S. in this matter."

"We welcome the recognition by the government in recent years, belated though it is, of the inescapable need to meet part of the cost of maintaining news agency correspondents abroad. The external affairs ministry in 1980 evolved a formula under which it meets part of the total expenditure, which at present ranges from Rs. 3,00,000 to Rs. 4,00,000 per new post," the commission has added.

"We recommend that this policy be continued and further liberalised so as to fill up the yawning gaps in the coverage of Africa and Latin America and large parts of Asia."

It was desirable that news concerning India and its perception of events in the sub-continent and in the world and spread to other countries, and that should be conveyed with competence news and interpretation of events in other countries should be available to Indian readers from Indian correspondents rather than through foreign news agencies, which had their own perceptions and prejudices, it said.

The commission has also recommended "a comprehensive look" by the government at the structure of overseas communication rates. It was urged before the commission that the rates charged by the overseas communication service (OCS) were high.

Under the press bulletin service (PBS) for transmission via satellite, for instance, there was a concessional rate of Rs. 8,000 per month payable at the Indian end for a 12-hour two-way satellite link with any part of the world. However, the OCS offered this rate only in respect of links with countries, which gave a reciprocal concession.

This policy had in effect been helping the western agencies only. "The insistence on reciprocity appears to call for an immediate review," the commission said.

In recommending PTI for expansion of operations abroad, the commission had taken note of a plea on behalf of the United News of India that in the interest of competition it might be allotted certain regions—for example South-East Asia and West Asia—for exclusive operations while PTI might cover other parts of Asia, Africa, the Americas and Europe.

REASONS LISTED

According to the commission report, while to some of its members the formula appeared reasonable, the majority viewed international coverage by two Indian news agencies as impracticable on several grounds.

First, an Indian newspaper desiring to have coverage of world affairs by Indian news agency correspondents will have to subscribe to the services of both the news agencies (the number of newspapers which do so at present is only 92 out of 454 dailies which subscribe to any wire news agency).

Second, each agency will be able to offer to potential subscribers abroad only its own limited coverage of international news.

Third, there was hardly any competition involved in the coverage of different regions of the world by two agencies.

CSO: 5500/7135

NEXT GENERATION SATELLITES IN PREPARATION

Calcutta THE STATESMAN in English 5 May 82 p 16

[Text]

NEW DELHI, May 4.—While INSAT-1 is expected to be operational in a short while, preparations are going on for configuration of India's next generation satellite.

The second generation satellite, it is envisaged, will be much larger than the first and in all probability will not be multi-purpose. In consonance with the new trend in satellite communication systems, India is expected to opt for simpler, smaller earth installations working with larger satellites.

Though its chief utility will be for telecommunications, the new satellite could be used for data communication, rooftop communication, facsimile and electronic mail, video conferencing, computer network and specialised [illegible] services.

The rural telecom service could be provided by erecting in the rural areas low cost small earth terminals. This would help take the benefits of satellite communication technology to the village doorsteps. Rural public call offices in accessible hamlets would become a distinct probability.

Similarly, the growing data traffic could be channelled through the satellite. Rooftop communication services would seem to be the answer to the long cry for higher reliability and speedier communication, specially in multi-storeyed commercial structures. In fact, a satellite derived circuit, it is felt, could be put to a number of uses for a number of applications requiring point to point linkage or point to multi-point transmission.

India would get a glimpse of the uses of the satellite system when INSAT-1A becomes operational. One could expect efficient links between main switching centres of the Posts and Telegraphs national network, main and distant primary switching centres and main and inaccessible areas.

The meteorological component (which, incidentally, could be separated in the next generation satellite) will help collect and transmit meteorological, hydrological and oceanographic data from unmanned remote automatic data collection platforms to a central data processing centre. It will also provide half-hourly synoptic observations of weather systems, including cyclones, sea surface and cloud temperature water bodies and snow cover mapping the whole of India as well as adjoining sea and land areas.

INSAT-1 is designed to provide two direct television broadcast channel over the entire country. Special community receivers in the rural areas can directly receive TV broadcasts from the satellite. Also, nationwise coverage by All India Radio, disaster warning and standard time and frequency dissemination are some of the other services to be expected from INSAT.

But all this conceals a lot of painstaking effort. The job of locating the earth stations demanded time and reasonable precision. Since the signals from the satellite are usually feeble, the sites chosen should be quiet to avoid interference. About 200 prospective sites had to be visited before choosing the 29 stations.

An earth station itself consists of more than a dozen sub-systems. Nearly 80% of the equipment is indigenous, including some sophisticated electronic ones. Only two sub-systems used in the final stages of transmitting and receiving—high power amplifier and lower noise amplifier—were imported.

However, since then through technology transfer, it is now possible to raise the indigenous component in the future earth stations to 90%. The progress in indigenising sophisticated equipment is because of the efforts on engineers of the Posts and Telegraphs Department who used to hold regular meetings with manufacturers providing them detailed technical inputs and in some cases even managerial guidance.

CSO: 5500/7136

INDIA

COMMUNICATIONS EQUIPMENT PRODUCTION PLANS REPORTED

New Delhi PATRIOT in English 29 Apr 82 p 6

[Text] A massive programme to produce and import communication equipment has been taken up in the country which would change the face of India in the coming years, Communication Minister C M Stephen said in the Rajya Sabha on Wednesday, reports PTI.

Replying to an over four hour debate on the working of the Ministry, Mr Stephen said the present capacity for manufacturing telephone instruments was only 8.5 lakh a year but the demand was projected to go up to 10 lakh by the end of the decade.

To meet this increasing demand the country was also going in for collaboration arrangements wherever necessary, such arrangements were nearing finalisation, the Minister told the House.

He said the country was importing multi-axis radio equipment from abroad to provide communication facilities in hilly and other difficult terrains. Eighteen of them would be furnished with these facilities within three years.

Several ruling party members in the Rajya Sabha on Wednesday joined the Opposition in complaining against the inefficient working of the telecommunication and postal services reports UNI.

Initiating a debate on the working of the Communications Ministry, Mr Dipen Ghosh (CPI-M) pleaded for a fair deal to the extra-departmental employees of the postal services.

Mr P N Sukul (Cong-I) said the telephone and telegraph services needed drastic improvement. He suggested introduction of a scheme of 'work incentives' to improve the efficiency of the staff.

CSO: 5500/7133

COMMISSION PROPOSES GREATER ROLE FOR PRESS COUNCIL

Bombay THE TIMES OF INDIA in English 28 Apr 82 p 6

[Text]

NEW DELHI, April 27 (PTI).

THE press commission has proposed an expanded role for the press council in keeping with its view that freedom of the press is not just the right of newspapers to publish news and views but the right of the citizen to information.

In this, it goes further than its predecessor — the first press commission — that the council should safeguard freedom of the press and ensure maintenance of high standards of public taste by the press.

The commission specifically sees the press council's role in upholding the citizen's right of reply and access to the press as well as the citizen's right to privacy, and in overseeing the observance of codes of advertising ethics.

It would also like to have representation for the press council in the boards of management of news agencies and on the proposed newspaper development commission.

The commission considers the press to be a public utility, whose services should be available to citizens for exercise of their fundamental right to freedom of speech and expression on a non-discriminatory basis subject to availability of space and "other relevant consideration."

It wants the press council, therefore, to be empowered to look into complaints of arbitrary and 'mala fide' denial of access to the press.

It wants the press to be barred from activities that amount to physical or electronic intrusion into a private home or office—specifically eavesdropping and unauthorised publication of photographs.

It, therefore, proposes that the council should be entrusted with the responsibility of looking into complaints of invasion of privacy and to monitor the press.

The commission notes that two codes of ethics in advertising are in operation: (1) The Indian and Far Eastern Newspaper Society Rules governing accreditation of advertising agencies, and (2) The Advertising Agencies Association code of standards of advertising practice.

The codes had some mechanism for their enforcement, but the machinery consisted of representatives of the press, the advertisers and the advertising agencies, but not of any representatives of the consumers.

The commission wants, therefore, the press council to oversee the observance of advertising codes by the press.

The commission has recommended that the press council chairman or his nominee should be one of the 12 members of the newspaper development commission, which would promote the development of the press as a whole.

It has taken the view that news agencies should be accountable to the public because they served not only newspapers but the general public.

It has, therefore, recommended that the board of directors of every news agency should have a director nominated by the press council chairman.

CSO: 5500/7132

INDIA

BRIEFS

OVERSEAS TELECOMMUNICATIONS--New Delhi, April 23 (PTI)--The Overseas Communications Service (OCS) took rapid strides in improving India's telecommunications with the world and increased its profits during 1981-82. According to the annual report of the ministry of communications for the year, the volume of telephone and telex traffic is expected to go up to 29,960 thousand minutes and 32,100 thousand minutes respectively as against 22,239 thousand minutes and 26,276 thousand minutes respectively in the previous year. The volume of photo telegraph service is also likely to go up from 1,177 thousand sq. cms. during the previous year to 1,257 thousand sq. cms during 1981-82. There has been a steady growth in its gross revenues and the net profits. The total gross revenue is expected to increase from Rs 61.88 crores in 1980-81 to Rs 64.75 crores in 1981-82. The net profit is expected to go up from Rs 42.15 crores in 1980-81 to Rs 44.71 crores in 1981-82. [Text] [Bombay THE TIMES OF INDIA in English 24 Apr 82 p 14]

HINDU NEWS SERVICE--United News of India has decided to launch its news service in Indian languages, reports UNI. The news service in Hindi starts from Saturday 1 May. Trial runs of the Hindi service started on Monday. The creditline on stories in Indian languages will be Univarta. In its report recently submitted to the Government on 5 April, the Second Press Commission has observed: "The development of a first-rate news service in Indian languages brooks no further delay." [Text] [New Delhi PATRIOT in English 27 Apr 82 p 15]

SATELLITE 'IN FINE SHAPE'--Bangalore, May 2 (PTI)--APPLE--India's experimental geostationary communication satellite--is in fine fettle and the performance of all subsystems aboard was normal, ISRO said tonight. The satellite was being used for a minimum of four hours a day for conducting various planned application experiments, ISRO said. The television transmissions had been successfully done through APPLE from the Ahmedabad and Delhi earth stations and they were received at compatible terminals. The computer networking experiment through APPLE had also been conducted and other experiments were in progress. ISRO said station keeping and on orbit operations of the spacecraft were expected to be continued till the end of 1982, depending on APPLE's fuel supply. The utilisation experiments with APPLE involving agencies such as the posts and telegraphs and Doordershan would be continued during 1982-83. The satellite launched on June 19 last year by the European space agency's Ariane launcher from Kourou in French Guyana, is positioned over 102 degrees east longitude. Being a complex mission, several unforeseen problems were experienced after the launch. But except for the nondeployment of one of the solar panels, they were overcome by the unremitting efforts of the mission team. [Text] [Bombay THE TIMES OF INDIA in English 3 May 82 p 1]

CSO: 5500/7129

BRIEFS

TELEVISION DEVELOPMENT--Ulaanbaatar, 23 Apr (MONTSAME)--The Seventh MPR 5-Year Plan will be a period of further development of the Mongolian television network and expansion of television broadcasting to the southern and eastern regions. A radio relay line more than 700 kilometers long will be constructed in the eastern aymags. As a result, thousands of rural residents will be able to watch television programs not only in black-and-white but also in color. They will be able to see national, USSR central and "Intervision" television programs. In addition, "Ekran"-type space communications television receiving stations will be built in the MPR in the current 5-year plan. [Ulaanbaatar MONTSAME in Russian 1927 GMT 23 Apr 82 OW]

CSO: 5500/2232

BRIEFS

BALUCHISTAN TELECOMMUNICATIONS PROJECTS--Minister of Communications Mohyuddin Baluch announced at a press conference in Quetta today that more than 2,000 telephone lines will be installed in the province and 42 small telephone lines will be set up with 600 lines each by the end of the current fiscal year. Public call offices will also be set up in the rural areas. About 126 new post offices will go into operation by the end of the year. [Karachi Domestic Service in Urdu 1500 GMT 8 May 82 GF]

CSO: 5500/2232

YIN FATANG AT XIZANG TELECOMMUNICATIONS MEETING

HK230808 Lhasa Xizang Regional Service in Mandarin 1130 GMT 22 Apr 82

[Summary] The 12th Xizang regional posts and telecommunications work conference was recently held in Lhasa. Yin Fatang, first secretary of regional CCP committee, and Jiang Cuo, vice chairman of regional people's government, attended the conference and gave speeches. Having summed up experiences, the conference pointed out the following demands and tasks for the construction and management of regional posts and telecommunications work between now and 1985.

The total amount of taxable posts and telecommunications work should increase by 3 percent over that of 1981 and the income of posts and telecommunications work should amount to approximately 3.8 million yuan. To ensure communications between Lhasa and Beijing, a ground satellite station is to be built in Lhasa. To ensure communications within Xizang, networks of long-distance phone lines are to be constructed in five districts in Lhasa municipality between May and June. Telex between Lhasa and Shannan and Rikaze and long-distance phone lines between Lhasa and Changdu, Lhasa and Rikaze, and Shannan and Naqu are to be constructed.

The conference held: We must rely on the leadership of the CCP committees and people's governments at all levels to carry out the construction of posts and telecommunications projects. We must straighten out enterprises and carry out technical renovation in a systematic manner. We must have comprehensive planning, make good use of our capital, strengthen management and adopt scientific measures to improve postal and telecommunications services. The following tasks should be carried out within this year and the next.

1. Construct a Lhasa ground satellite communications station and strive to complete the task before the end of next year.

2. Strive to put 400 direct dial telephones in Changdu into operation within the year.

3. Construct two long-distance phone lines between Xizang and Gansu and between Xizang and Qinghai. Telecommunications systems are to be rearranged into nine lines connecting Lhasa and Beijing, Chengdu, Xian, Lanzhou, Tianjin and Shanghai.

4. Renovate long-distance phone lines between Lhasa and Rikaze and between Jiangzi and Yadong and strive to complete the work by the fourth quarter.

5. Increase the number of runs of the postal service. Postal services from Lhasa to all prefectures should amount to five or six times while those from prefectures to counties should be two to three times. County post offices should strengthen renovation and management work for postal service in the rural areas.

6. Do a good job of training work so as to enhance political consciousness and technical knowledge of the staff and workers.

7. Carry out overall rectification among the existing enterprises, promote democratic management and do a good job of all construction work.

CSO: 5500/2232

BRIEFS

BROADCAST STATIONS--According to GUANGMING RIBAO, broadcasting stations have been set up in all of China's municipalities and counties. Seventy-two percent of the production brigades and 65 percent of the production teams have rediffusion facilities. Loudspeakers have been installed in 49 percent of the rural households, totaling approximately 90 million in number. Wire broadcasting is major means of propaganda in the countryside. [Beijing Domestic Service in Mandarin 0900 GMT 11 May 82 OW]

CSO: 5500/2236

NATIONWIDE TELEVISION NETWORK SOON

Colombo THE ISLAND in English 3 May 82 p 1

[Article by B. C. Perera]

[Text] The Government-owned Independent Television Network will cover the whole island soon,The Minister of State Mr.Anandatissa de Alwis told 'The Island'.

As a first step its range will be increased from the present limit of 30 miles radius of Colombo to about 65 miles radius.

The first phase of this programme, the Minister explained started recently with the begining of the construction work on the transmitting tower and the office complex to house the ITN at Wickremasinghepura, near the country's new capital Sri Jayewardhanapura.

Mr.de Alwis, said that ITN would be Rupavahini."It will be turned into a TV system operating from Sri Lanka's new capital, independent and not in anyway subservient to the Rupavahini", the Minister said.

ITN, according to the Minister, will have a gradual growth financed by its own earned resources.

Mr.Thevis Guruge, the Competent Authority of the ITN explaining the Minister..s plan to 'The Island' said that the present transmission mast of the ITN was in a virtual valley and the effective height of the 105-foot tall mast is about 90 feet.The spot where the new mast is now being installed is 120 feet above sea level and the actual mast itself will be 320 feet, giving the mast a n effective height of 420 feet.Although the possible reach of the ITN after the installation of the new mast is 65 miles there would be a "grace" radius of at least 10 to 15 miles, where ITN could be received fairly clearly.After the completion of this mast, viewers both in Puttalam and Anuradhapura, would be able to receive ITN services "quite clearly".

ITN is also constructing an additional transmitter which would be used as a stand by if the regular transmitter went out of order.

The installation of the transmitter and the construction of building will cost around Rs.10 million, which will befound from ITN's own earnings.

Along with the two transmitters there will be studio facilities and transmitting hall, studio library and ITN offices.

Mr.Guruge explained that the purchasing power of English speaking class was high and they had to be catered to.

According to Mr.Guruge, the Minister's plan to make ITN a strong competitor to Rupavahini would be carried out by connecting the main towns with low powered micro-wave transmitters.ITN hoped to relay its services soon to Nuwara-Eliya, Kandy, Jaffna,Trincomalee, Galle and Matara, where there are concentrations of those who speak English.

CSO: 5500/5799

MICROWAVE LINK BETWEEN COLOMBO-MADRAS

Colombo DAILY NEWS in English 4 May 82 p 1

[Text] General Sepala Attygalle, Chief Co-ordinating Authority, Ministry of Defence, yesterday inaugurated the new Air Traffic Control Centre at Ratmalana airport by speaking directly to Madras Control Centre on the microwave link that has now been established between the two countries.

General Attygalle said that the establishment of direct speech facilities between Colombo and Madras was a great leap forward in communications and would strengthen air navigation in the region.

"President Jayewardene, under whose ministry the subject of aviation comes has always stressed the need for air safety. The establishment of this centre is a long-felt need" the general added.

He thanked the Resident Representative of UNDP, Mr. Y. Y. Kim who was present, for the gift of this expensive equipment to Sri Lanka under an aid program. The equipment, which is the latest in air traffic control, is valued at U.S. $2.8 million.

Mr. D. H. S. Athulathmudali, Director, Airports Authority, thanked the technical staff for creating what he called a record by installing the equipment in one week.

Airports Authority Chairman Col. H. B. Wijekoon and the Indian Ambassador in Sri Lanka, Mr. Thomas Abraham, were also present at the inauguration ceremony.

CSO: 5500/5799

PLAN TO IMPROVE TELEPHONE SYSTEM

Colombo DAILY NEWS in English 5 May 82 p 1

[Text] The Ministry of Posts and Telecommunications is finalising plans to overhaul the country's telephone system at an estimated cost of Rs. 1000 million.

Posts and Telecommunication Minister D. B. Wijetunge told a press conference yesterday that the far reaching changes were to be made with a view to updating and improving the present system.

Explaining the reasons for the changes Mr. Wijetunge said if direct dialling countrywide was made possible much delay and trouble would be eliminated.

The Colombo Central telephone exchange for instance he said has to cope with 2 million calls daily. This 'overload' is what causes delay, cross-connections and frayed tempers.

Replacing the Colombo Central exchange along [as published] is expected to cost Rs 150 million. This exchange serves 14,000 subscribers whose telephone numbers begin with 2 or 3. It has been in service for the past 15 years.

Also be be replaced is the 30-year-old worn out cable system. Work on this is to take place in stages. In Kotte such work is nearing completion. Echelon Square Kollupitiya and Nugegoda exchange areas will next be taken-up.

An additional 21 exchange areas, including Padulla, Chilaw and Kurunegala, are to be brought into the direct dialling network by the end of the year. This would benefit 10,000 new subscribers.

Speaking on the applications for telephones, Mr. Wijetunge said, in Colombo alone ten thousand were on the waiting list. Daily around 500 fresh applications are received. 'This is a big change from the 1970-77 period when people were giving up their phones', he said.

Associated with the Minister at the press-conference was Posts and Telecommunications Secretary Annesly Jayewardene and Telecommunications Director A. Shanmugaraja.

CSO: 5500/5799

NEW POSTAL, TELEGRAPH PROJECTS, PRODUCTS COMPLETED

Hanoi QUAN DOI NHAN DAN in Vietnamese 6 Apr 82 pp 1, 4

[Article by Nguyen Doan: "Completion of 451 New Projects and Products"]

[Text] Emulating in achieving to greet the Fifth Party Congress, the postal and telegraph sector employed 451 projects and products to develop the use of underutilized network equipment and of equipment in storage to heighten the potential of signal communication so as to serve society better even with the limited capital from the State. The Hanoi-Ho Chi Minh City-Minh Hai wire communications project completed the installation of 14 main stations and opened 66 communications channels linking Hanoi and Danang. This is 2080 kilometers open wire communication project with a capacity for hundreds of lines of carrier wave telephones, standard telephones and teletypes. The equipment and supplies were provided by the postal and telegraph sector from equipment and supplies available in the country, already in networks and stocked in warehouses. Only a very small number of supplemental equipment parts had to be purchased from abroad. In order to develop the effectiveness of the investment, each part of the project was immediately placed into operation upon completion. In 1979, thanks to having installed a crossbar on 40016 telephone poles, the sector could use 24 communication channels between Hanoi and Ho Chi Minh City. In the emulation drive to get the Party Congress, the sector completed the installation of 3 cross bars on the telephone poles between Hanoi and Danang, thus tripling the signal capacity of this line.

In order to use communications equipment more effectively the sector also dismantled a 5000 position automatic telephone switchboard from a small southern city and reinstalled it in Hanoi and solved a series of technical problems so that this set could operate in synchronization with sets of differing standards already in operation in the automatic telephone network in Hanoi, thus doubling the automatic telephone capacity of Hanoi. This switchboard has operated with 100 locals in closed circuit on a trial basis.

Also by thoroughly using the available signal equipment and by rationally reorganizing the network, the Ho Chi Minh City postal and telegraph sector and telecommunications center 3, in spite of the small amount of capital available, opened a new radio relay link between Ho Chi Minh City and Tay Ninh; telecommunications centers 1 and 3 opened two additional telephone and short wave radio channels between Hanoi and Ho Chi Minh City. The most remarkable product of the postal and telegraph sector in this emulation drive was a gauge manufactured by the Hanoi telegraph station that measures teleprinter operations. Because of this gauge, the precise adjustment of more than 200 teletypes in operation in installations in Hanoi which previously had to be done by hand is now done mechanically, decreasing the time for readjustment from between 4 and 8 hours to about 5 to 10 minutes, increasing the readjustment quality, and decreasing the number of teletyping errors. This gauge has been selected for exhibit at the creative youth fair to be held in Moscow.

The quality of information through posts and telegraph has increased in the emulation drive to greet the Party Congress. Utilization of the Hanoi-Haipong wire lines has increased by 1 to 10.5 percent. Also, the quantity of delayed long distance calls and of undispatched telegrams per day have declined markedly. In February the Hanoi postal and telegraph sector alone handled 47,640 long distance calls and dispatched 271,369 telegrams.

8418
CSO: 5500/5776

SIGNAL, LIAISON MAIN STATION CONSTRUCTED, PLACED INTO OPERATION

Hanoi NHAN DAN in Vietnamese 5 Apr 82 p 4

[Article: "Signal and Liaison Forces Complete Construction of and Place Main Station 4 into Operation"]

[Text] Aiming at heightening the quality and efficiency of signal communications so as to effectively serve in defending and building the Fatherland, the signal and liaison forces have just completed the construction of and placed Main radio station 4 into operation.

This is a signal project with modern equipment and high technological requirements in planning and building. The branch headquarters concentrated cadres and soldiers with construction experience and skills to participate in the construction; cadres and soldiers of the project detachment and of the 5th Signal Group pledging to emulate and register workdays, workhours and output, struggled to complete the project on time and in compliance with the required quality. During the construction the units, overcoming hardships and shortages and coordinating mechanical with rudimentary means, loaded and unloaded hundreds of tons of machinery, equipment and construction materials, worked continuously in shifts, and had no Sundays off to level the ground, construct more than one hundred square meters of equipment installation building, deal with personnel support activities and construct secondary projects. Members of the youth union of the units, organizing many communist work days and hours, gathered tens of cubic meters of broken and old bricks for the foundation of factories 1 and 2.

8418
CSO: 5500/5776

BRIEFS

BEN TRE WIRED RADIO STATIONS--At present Ben Tre has over 40 basic level wired radio stations with a system of 578 public loudspeakers and nearly 700 family loudspeakers. Many villages, wards, schools, hospitals, etc. have used the wired radio system to propagate the Party's line and policy to the masses. [Text] [Hanoi HANOI MOI in Vietnamese 14 Apr 82 p 4]

CSO: 5500/5807

'PRAVDA' NOTES CSSR ROLE IN INTERCOSMOS PROGRAM

PM070853 Moscow PRAVDA in Russian 27 Apr 82 p 5

[Correspondent I. Biryukov dispatch under the rubric "News From the Socialist Countries": "Intercosmos Orbits"]

[Text] Prague, 26 Apr — Prague's higher educational institutions are participating actively in fulfilling the tasks posed by the Intercosmos program. The greatest contributions are being made by scientists at Prague's Charles University and the Czech higher technical college.

They have solved a number of complex problems connected with accelerating the processing of information transmitted to earth by satellite, creating equipment for analyzing X-ray and ultraviolet emissions from stars and manufacturing apparatus designed to measure the Earth's heat loss. Observatories and artificial satellite observation stations have been equipped with lasers developed by Prague physicists from the Czech higher technical college.

Together with their partners from the USSR, GDR, Poland and Hungary, Czechoslovak scientists are now taking part in setting up ground-based space observation stations. CSSR scientists have taken on the task of designing a laser transmitter. In conjunction with a computer, the new equipment will make it possible to determine satellite distances from earth with a precision of up to 10 centimeters over a distance of 10,000 km. Study of their flight trajectory yields important data for science and practice.

CSO: 5500/2232

BRIEFS

NEW MATANZAS TELEPHONE CENTRAL--Matanzas--In celebration of the anniversary of the proclamation of the socialist character of the Revolution and of the Victory at Giron, a new automatic telephone central with technology from the German Democratic Republic will begin operating Saturday at 2100 hours in this city. The installation of this new plant required an investment of more than 200,000 pesos. Another central of the same type went into operation in July 1981 in the Penas Altas area. Still another is in the initial stages in the Naranjal section where the population has recently increased enormously due to the construction of numerous multi-family dwellings. During the capitalist era, this city had only 1,600 telephone lines in service; now there are 5,000 which is more than triple that number. In spite of the large investments made, the telephone rates remain the same as they were when the Revolution triumphed. The telephone central which goes into operation today serves the eastern part of this city, including the sections of Pueblo Nuevo, La Jaiba, the Camilo Cienfuegos development and part of the seashore. The management of the enterprise has stressed the fact that this new installation does not necessarily mean an immediate increase in telephone service in these areas but it does provide the conditions for such an increase in the future. For now, the new central will eliminate the overload at the Matanzas Centro plant where the work load is far greater than what had been planned for it, and it will also substantially improve the quality of the service rendered present subscribers. This new plant fills the Matanza communications workers with pride. This year they will hold a magnificent celebration of national Communications Workers Day in this province. [Text] [Havana GRANMA in Spanish 17 Apr 82 p 1] 9204

CSO: 5500/2222

MUSAVI INAUGURATES NEW TELEVISION TRANSMITTER

LD202250 Tehran Domestic Service in Persian 1630 GMT 20 May 82

[Text] According to the Central News Unit, a powerful television transmitter was inaugurated this afternoon at Koh-e Mond in a special ceremony attended by Prime Minister Mir-Hoseyn Musavi; Minister of Roads and Transport Neshad Hoseynian; Nabavi, Majlis deputy from Bushehr; and Hashemi-Rafsanjani, managing director of the Voice and Vision of the Islamic Republic of Iran.

According to this report, the inhabitants of Bushehr Province will not be able to receive Channel One television programs on Channel 12.

During today's ceremony, Prime Minister Musavi paid tribute to the service of engineer 'Ebadi, chief project manager of the Koh-e Mond transmitter.

We draw your attention to a report sent to us by our correspondent:

Prime Minister Mir-Hoseyn Musavi, accompanied by the minister of roads and transport, the managing director of the Voice and Vision of the Islamic Republic of Iran, the imam's representative and Friday imam of Bushehr, and the Majlis deputy from Bushehr, who arrived in Bushehr this morning, toured Bushehr's airbase, Iran's maritime industries, the southern fisheries, [word indistinct] and the Bushehr nuclear powerplant. This afternoon the delegation toured Bushehr's Koh-e Mond television station.

Reporting to the audience, the managing director of the Voice and Vision of the Islamic Republic of Iran said the new transmitter will cover more than 90 percent of Bushehr Province.

The delegation accompanying the prime minister held a meeting this afternoon which lasted more than 2 hours to discuss the problems and issues of Bushehr Province.

According to the Central News Unit, Managing Director of the Voice of Vision of the Islamic Republic of Iran Mohammad Hasehmi-Rafsanjani visited the Voice and Vision center in Bushehr today and reviewed the center's problems and shortages.

In the ceremony to inaugurate the Koh-e Mond television transmitter, the managing director announced that his organization will try to provide the inhabitants of Bushehr Province with the programs transmitted by the second television channel, by installing a microwave link.

CSO: 5500/2236

BRIEFS

DIRECT TELECOMMUNICATIONS LINKS--JOMHURI-YE ESLAMI's correspondent has reported from the Iran Telecommunications Company that recently direct communication links without the assistance of an operator have been established with the following countries, using the following codes: Singapore 006, Norway 0047, Finland 00358, Denmark 0045, Sweden 0046, Syria 00963, Luxemburg 00352 and Ireland 00353. [Tehran JOMHURI-YE ESLAMI in Persian 3 May 82 p 5 GF]

CSO: 5500/2236

BRIEFS

NEW TV CHANNEL--Mr Abdullah al Nuweis, undersecretary of the Ministry of Information and Culture, has announced that trial transmission from the second channel of Abu Dhabi TV will start on Saturday on UHF-48. It will be a daily three-hour transmission, beginning at 8.00 p.m. The trial period is scheduled to last a couple of months, but, from June 1, the transmission will be extended to cover al-Ain on UHF-35. The eastern region and the islands will also be gradually covered when the necessary booster facilities are completed, he said. It is understood that the second channel, 5, though mainly meant for expatriates as is the trend in the other Gulf states, will not, however, be completely foreign-oriented. The programmes will include Arabic feature films, documentaries, plays and folklore. The announcements will also be in Arabic, with subtitles in English, and vice versa. [Excerpt] [GF131146 Dubayy KHALEEJ TIMES in English 13 May 82 p 3 GF]

CSO: 5500/4721

FRG MEDIUMWAVE TRANSMITTER TURNED OVER TO RADIO MALI

Bamako L'ESSOR in French 6-7 Mar 82 p 4

[Text] Since Thursday, 25 February, Radio Mali has had a mediumwave and FM transmitter. The official presentation of this transmitter, which is a result of German-Malian cooperation, was made at a ceremony attended by our minister of foreign affairs and international cooperation, Alioune Blondin Beye; Minister of Information and Telecommunications Gakou Fatou Niang; the secretary of state at the Federal Ministry of Economic Cooperation, Konrad Porzner; our ambassador to Bonn, Sekou Sangare; and the former FRG ambassador to Mali; Mr Holtermann.

The first speaker, Konrad Porzner, stressed the importance to our country of acquiring means of communications. He expressed hope that the transmitter which has just been turned over to the Malian Government will contribute to the education and well-being of our people.

Then the advising engineer, Powroslo, praised the cooperation that he and his colleagues had received during the installation of the transmitter. He added that the next step is theoretical and practical training of the operating personnel so that in 1983 the Malians can themselves take over operation.

The minister of information and telecommunications, Mrs Gakou Fatou Niang, underlined the importance of the new transmitter for our socioeconomic development:

This ambitious project is an important step in our continuing struggle for sociocultural and economic development. It was made possible, at a cost of almost 2.7 billion Malian francs, through the generous help of the FRG.

It was because of the many problems caused by the age of our present broadcasting facilities and the inadequacy of our national coverage that the Department of Information and Telecommunications decided to upgrade the transmitters of the national broadcasting.

This project, which includes expansion, modernization and centralization of our broadcasting centers at Kati, was submitted to the FRG in 1979 and reviewed favorably by the KFW [Credit Institution for Reconstruction]. This resulted in the signing of a preliminary loan agreement between the KFW and the Mali Republic. Subsequently, this loan agreement was converted to a gift, thanks to the understanding of the FRG Government and the great generosity of the German people.

The project, which will take 2 years, from 1980 to 1982, to complete, includes the building, the access roads, the antenna bases and the transmitters themselves:

--One 100 kW shortwave transmitter with an omnidirectional shortwave antenna covering a range from 50 kW with a log-periodic antenna pointed north and covering an area of from 500 to 2,500 km;

--Two automatic generating units of 550 kVA each.

In addition there will be a UHF link with a power output of 2 x 300 watts which will not only link the studio with the Kati broadcasting center, but also provide FM coverage for the city of Bamako.

The final acceptance of the building constructed by UDEC-Mali took place in May 1981, and the work of installing the technical equipment, which began in June 1981, is proceeding normally and without problem. In fact, it is thanks to the quality and steady progress of the work that we are able to proceed today with this first phase, the putting into operation of the 100-kW mediumwave transmitter.

Ministers, Excellencies, Ambassadors, this ceremony thus provides one more proof of the success of German-Malian cooperation, whose dynamism and consistency has already been demonstrated on numerous occasions and also in other fields.

As you can see, the broad scope of this cooperation and the special attention which it devotes to the priority objectives of our development program reflect concretely the felicitious feelings of solidarity between our two people and governments.

Therefore, Mr Minister, in the name of the Malian people, in the name of their party, the Democratic Union of Malian People, in the name of Head of State Gen Moussa Traore, I ask you to relay to the FRG people and government the expression of our profound gratitude and our sincere thanks.

9920
CSO: 5500/5754

BRIEFS

EXPERIMENTAL TELEX OPERATION--The new Maputo telex office will operate on an experimental basis during the month of May. This was announced by the directorate of the Mozambique Telecommunications company. Moreover, all telex subscribers are asked to "maintain their equipment in an operational state, hooked up to the two outlets (network and telegraph)." Final tests will be conducted during this period and service may be interrupted without previous notice. As had been announced last February, the operation of the new telex office will allow a normalization of domestic connections. It is part of the project for the establishment of a national telecommunications network during the eighties. The new electronic digital equipment can connect up to 1260 lines between subscribers and junctions, ensuring automatic service connection for more than one million subscribers in the entire world. The digital telex equipment will offer the most advanced technology and will make available to subscribers a range of additional services, such as notification of the length of calls. The present project for the establishment of a new national telecommunications network is aimed at improving existing modern systems or replacing old and outdated ones. [Text] [Maputo NOTICIAS in Portuguese 29 Apr 82 p 10]

RADIO SHORT-CIRCUIT--A breakdown has affected broadcasting by Radio Mozambique since last Saturday [24 April]. Operation resumed yesterday [26 April] at about 1530 hours on an experimental basis on a 407 meter band but the broadcast was short-lived and the radio fell silent again at 1630 hours. The technical director of Radio Mozambique stated that the irregular broadcasting noted during Saturday and Sunday was due to a short-circuit that affected power to the broadcasting station. Through the efforts of a number of technicians, broadcasting resumed yesterday on an experimental basis, but the heavy burden on the transformer caused by a current slightly higher than normal broke down the system again. [Excerpt] [Maputo NOTICIAS in Portuguese 27 Apr 82 p 2]

CSO: 5500/5806

BRIEFS

SOLAR ENERGY FOR TELECOMMUNICATIONS--Plans have reached an advanced stage to introduce solar energy into the country's telecommunications system. This is to minimize maintenance cost and ensure efficient and effective telephone system throughout the country. The minister of communications, Mr Audu Ogbe, disclosed this today in Lagos in an interview with a Radio Nigeria correspondent. Mr Ogbe explained that the operation of the new system will enable subscribers to make calls without the assistance of operators. He said that the establishment of the new system will cost less and that breakdown of generators will not be as regular as with the old system. Also today Mr Ogbe received the Swedish trade delegation on tour of Nigeria. He urged the delegation to establish a telecommunications company in the country to manufacture telephone materials. [Text] [AB191546 Lagos Domestic Service in English 1500 GMT 19 May 82]

CSO: 5500/5804

BRIEFS

TV EXPANSION--TV 2 and TV 3 transmitter in Bloemfontein and Kimberley will start transmitting full-time from May 24. The first month of operation will be considered as a test period. The normal TV 2 and TV3 programmes will be broadcast, but transmissions might be interrupted during this period without warning or apology, to carry out necessary adjustments or repairs, SABC announced in Johannesburg yesterday.--SAPA [Text] [Johannesburg THE CITIZEN in English 14 May 82 p 9]

CSO: 5500/5797

USSR SATELLITE COMMUNICATIONS DESCRIBED

PM101351 Moscow PRAVDA in Russian 3 May 82 p 3

[Article by G. Markelov and M. Fedorov, doctors of technical sciences: "Communications Through Space"]

[Text] Cosmonautics exerts a tremendous influence on various spheres of science and the national economy, but its influence on the means of receiving and transmitting information is especially profound. Lines of communication, in which artificial earth satellites are used, are a fundamentally new development in this matter. A satellite receives radio signals from a ground station and relays them, or first amplifies them and then transmits them, to another station. This ensures the possibility for a considerable number of stations located great distances apart to operate simultaneously via a single satellite.

The orbit of the relay satellite is selected taking into account the required zone to be served during a given time. The circular geostationary orbit — at an altitude of 36,000 km above the earth's surface and in the same plane as the equator -- if especially conveninent. The satellite is stationary in relation to an observer on the ground and over 1/3 of our planet's surface falls within its radio footprint.

In recent years communications via artificial earth satellites have assumed a primary position among other types of electronic communication. This can be attributed in particular to the great throughput capacity of communication lines and their high efficiency in transmitting information over large distances, and also to the fact that the potential for effecting global (worldwide) communication has emerged and so forth.

The creation of a new relay satellite is a great event. Since 1978 the family of Molniya, Raduga and Ekran satellites in the Soviet Union has been supplemented with Gorizont-series apparatus.

The Gorizont geostationary satellite is a multipurpose one. It is used for communications, broadcasting and control and makes it possible to considerably increase efficiency in transmitting information in the interests of the country's national economy and international cooperation.

Gorizont fulfills some of its "duties" in conjunction with the network of Orbita ground stations, whose potential has now considerably increased. The relaying of the two central television programs is ensured taking account of the time shift across the country's territory. As well as television broadcasting, satellite communications channels are available for radio broadcasting, telephone conversations and transmitting newspaper matrices.

Relaying signals to Orbita stations takes place via several wide-band "channels" [stvoly] of the receiving and transmitting apparatus of the Gorizont satellite. It is possible to transmit one television program or effect about 1,000 telephone conversations simultaneously via each of these "channels."

Gorizont considerably increases the volume of information in the Intersputnik system. International telephone and telegraph communications and the exchange of television and radio broadcasts between different countries have been organized.

The Gorizont satellites enable the zone of operation of the Intersputnik system to be extended. It is possible via these to effect communication between our motherland's capital and all populated continents of the globe. The ranks of the Intersputnik organization have also been swelled. Recently Afghanistan, Vietnam, Laos, the PDRY and Syria have become members. Over 20 countries, which are not members of the organization, make use of its services. With the aid of the Gorizont satellites, over 30 countries received a total of about 2,000 hours of broadcasts from Moscow during the 1980 Olympics.

Gorizont also acts in collaboration with the Moskva television system which used comparatively simple and cheap ground receiving stations. The Moskva and Ekran systems enable television programs to be received over the country's entire territory.

The use of the Orbita stations on their own for these purposes is only justified economically for major population centers. As for the Ekran system, it is highly efficient and is being successfully exploited in the cities and villages of Siberia, the far north and partially in the Far East. However, by virtue of the restrictions caused by possible interference to the ground communication facilities of neighboring countries using same radio frequency range, it is not possible to extend the zone of operation of the Ekran system to other regions of our country.

In order to work with the Moskva stations, the Gorizont satellite has as part of its onboard relay apparatus a special enhanced-power "channel" and a narrow-directional antenna. The output density on the earth's surface thus achieved enables television signals to be received simultaneously on small antennas (reflector diameter -- 2.5 meters). Moreover, thanks to special methods of processing signals, interference to ground services is eliminated.

In March 1982 a modernized version of the Gorizont satellite, which tackles a number of additional satellite communication tasks, was put into orbit. On board, as well as the six-channel receiving and transmitting device designed for the Orbita, Intersputnik and Moskva systems, extra relayers were installed which have the international registration indices Luch and Volna. They will provide satellite communications for marine ships and for aircraft. In particular, this will provide the opportunity to increase the efficiency of the control of the maritime trade fleet, reduce sailing time and increase the safety of navigation on the world's oceans. Soviet industry has already begun to produce ship's apparatus for communications via Gorizont.

The satellite's creators face a number of scientific and technical problems during the development process. For example, it proved difficult to achieve the electromagnetic compatibility of diverse onboard relay apparatus during simultaneous operation on different radio frequency bands and to ensure a high degree of reliability together with a long operating life.

Standardized designs of onboard systems and units of the Raduga and Ekran satellites are being used on the Gorizont, taking account of the achievements of space technology that have occurred in recent years.

The Gorizont's dynamic design layout ensures its triaxial orientation in space with an accuracy to within a few angular minutes, the longitudinal axis of the satellite being constantly directed toward earth.

Affixed to the end of the instrument bay, whose axis coincides with the satellite's longitudinal axis, is the antenna unit. It comprises waveguide circuits and a bank of antennas. By switching some of them, it is possible to change the zone served by individual relay channels.

Two panels of solar-activated photoelectric cells are linked with the instrument bay by monaxial electric actuators. The rotation of the panels around the satellite's lateral axis is effected at a speed that approximates that of the orbit, which ensures their constant orientation toward the sun. At the same time the actuators transmit electricity from the panels to the onboard apparatus.

The relay device on board is located with the instruments of the control and measurement system in a bay which is cylindrical in shape. Here, there is also a bank of chemical batteries, which feeds the apparatus in the shaded section of the orbit during the spring-fall period.

The Gorizont was put into orbit by the multistage proton carrier rocket with a D-rocket unit as the final stage.

The creation of the multifunction Gorizont relay satellite is a major contribution to resolving the task set by the 26th CPSU Congress: to make wide use of earth satellites to organize multiprogram television and radio broadcasting, telephone communications with remote regions and the transmission of pages of central newspapers by phototelegraphy. Soviet science and technology have shown once again the great potential of space technology which promotes mankind's progress.

CSO: 5500/2232

BRIEFS

NEW KAZAKHSTAN TV RELAY STATION--Kustanay--The most remote sovkhoz in the oblast, the Bestauskiy Sovkhoz, has been brought into the zone of reliable reception of central television programs. A relay station has come into operation here. Now, not only the virgin-land workers who live on the central farm but also the stockmen who are to be found all year round out on the steppe with their flocks can watch programs from the capital. In the major grain-producing area of Kazakhstan a comprehensive program of expanding the rural television audience is being successfully implemented. [Text] [PM031537 Moscow SEKSKAYA ZHIZN in Russian 25 Apr 82 p 4]

CSO: 5500/2232

FIBER OPTICS INTRODUCED INTO SWEDISH TELEPHONE NETWORK

Stockholm NY TEKNIK in Swedish 18 Mar 82 p 8

[Article by Miki Agerberg]

[Text] In Sweden fiber optics has taken its first giant step from a vision of the future to an everyday technology. The various telephone stations in Stockholm will be connected with the new glass fiber cable. The same is true in Goteborg and Malmo. The Telecommunications Service has just purchased the cable and the first ones will be installed this year.

Before now in Sweden the new glass fiber optics has been used only in tests and in extremely rare applications, but now for the first time it has competed successfully with older cable types and become a commercially feasible technology.

"This is a breakthrough for fiber optics in Sweden," Viesturs Vucins of LM Ericsson said.

LM Ericsson will produce most of the new cable through its subsidiary Sieverts Kabelverk. A small portion of the order went to Nippon Electric of Japan.

The glass fiber cables will be used to connect the various telephone stations within Sweden's three largest cities. At the same time that the new computerized AXE exchanges are installed at the stations, the old cables will be replaced with glass fiber cables.

The initial phase of this project was a field test in Stockholm. For several years the telephone stations in Fredhall and Appelviken have been connected by glass fiber cables.

"Connecting telephone stations within large cities requires great capacity and the distances are rather short. The glass fiber cables are commercially competitive under these conditions," said Mattias Gronberg, head of transmission technology at the Telecommunications Service.

The glass fiber cables are easy to install. Telephone conversations and other information are transmitted as light signals in fibers that are no thicker than hair.

Six to eight such fibers enclosed in a cable 1 cm in diameter are sufficient to handle all telephone conversations and data transmissions between two large telephone stations.

By way of comparison, a conventional cable between two large stations is about 10 cm in diameter.

In England the government recently decided to make a major investment in fiber optics. All large cities will be connected with glass fiber cables and they will be used primarily for cable television (see separate article on p 8).

Is this what we may expect in Sweden in the future?

It appears today that glass fiber cables connecting the Swedish cities with one another would be much too expensive, according to Mattias Gronberg of the Telecommunications Service.

In England the economic conditions are much more favorable, since the cities are larger and closer together. There is also available space for stringing the cables.

There are, on the other hand, advanced plans for using glass fiber cable for local cable television within the cities in Sweden. The Telecommunications Service plans to receive programs from foreign television satellites with central parabolic antennas and distribute them to homes by way of cable TV (see NY TEKNIK 1982: 6).

Within the next few years the first cable TV experiment with fiber optics will begin in a Swedish community.

Further in the future, a fiber optic network may be developed that could be used for many different types of communication: telephone, cable TV, teledata, etc. That would mean major changes in Swedish homes.

9336
CSO: 5500/2224

BRIEFS

WORLD RECORD IN FIBER OPTICS-- Researchers at Telecom, the British telecommunications agency, believe it is possible to use glass fiber cables over a distance of 30 km without amplifiers. The researchers said that this was a world record--twice the previous possible distance. It was previously believed in England that intermediate amplifiers would be needed every 18 km. but now a 30 km loop will be constructed for test use under realistic conditions. If this technique meets expectations, the researchers will have reduced light losses in the fibers considerably. Light losses mean amplifier stations must be close together, which makes the use of glass fiber cables more expensive. Now the British believe that it will be possible to install a fiber cable across the channel without a single intermediate amplifier. [Text] [Stockholm NY TEKNIK in Swedish 4 Mar 82 p 18] 9336

CSO: 5500/2224 END

JPRS 80987

4 June 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 221

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 80987

4 June 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 221

CONTENTS

WORLDWIDE AFFAIRS

Briefs

Mozambique, Cuba Cooperation 1
USSR, Kampuchea Broadcast Accord 1
Broadcasting Accord With Kampuchea 1
'KCNA', Bangladesh Agency Agreement 1
USSR, FRG Broadcasting Protocol 2
Hungarian-Kampuchean Cooperation Accord 2
'TASS' Tunisian Agency Cooperation Treaty 2
China To Help Tunisia 2
Moscow To Launch Indian Satellite 2

ASIA

INTER-ASIAN AFFAIRS

Briefs

'XINHUA,' 'KCNA' News Exchange Accord 3
Data Network Accepted 3

AUSTRALIA

Opposition Leader Says Government Withholds Funds From Telecom
(THE COURIER-MAIL, 5 Apr 82) 4

Briefs

Satellite Communications System 5
Satellite Communications Contracts Signed 5

INDIA

Government's Television Policies Discussed
(INDIA TODAY, 31 May 82) 6

Boring Programs Termed Problem, by Sumit Mitra, Anita Kaul
State Control of TV Criticized, V. Sathe Interview

JAPAN

Teletext Broadcasting System Considered
(KYODO, 13 May 82) 16

Ferrite Radio Wave Absorber Developed
(KYODO, 14 May 82) 17

PAKISTAN

International Gateway Exchange-Progress Reported
(H. A. Hamied; DAWN, 14 May 82) 18

PEOPLE'S REPUBLIC OF CHINA

Monthly Radio, TV Magazine To Be Published
(Beijing Domestic Service, 5 May 82) 19

Ningxia Expands TV Broadcasting Network
(NINGXIA RIBAO, 8 May 82) 20

Briefs
Broadcast Stations 22

THAILAND

Briefs
Radio Thailand Transmission Power 23
New TV Transmission Station 23

VIETNAM

Widespread Use of Cable Radio Reported
(THE RISING NEPAL, 5 May 82) 24

EAST EUROPE

INTERNATIONAL AFFAIRS

Briefs
'PAP'-'ADN' Cooperation 26

CZECHOSLOVAKIA

Briefs
New Transmitter 27

POLAND

Wiewiorowska Book on Satellite Television Reviewed
(SPRAWY MIEDZYNARODOWE, Jul 81) 28

LATIN AMERICA

BERMUDA

Briefs
Satellite News Plan 29

NICARAGUA

'ANN's' Plans for International Expansion Explained
(Edgard Barberena S.; BARRICADA, 18 May 82) 30

NEAR EAST AND NORTH AFRICA

IRAN

Briefs
New Television Relay 33
Radio-TV Chief Returns 33
Direct Telecommunications Links 34

OMAN

Briefs
Telecommunications Agreements Signed 35

SAUDI ARABIA

Briefs
Solar Power Fiberoptics 36

UNITED ARAB EMIRATES

Briefs
New TV Channel 37

SUB-SAHARAN AFRICA

KENYA

Briefs
Radio Expansion Plans 38

SOUTH AFRICA

Details on SMD Designed Radios Given
(ARMED FORCES, Feb 82) 39

ZIMBABWE

Use of Satellite Photos To Improve Farming Considered
(THE HERALD, 6 May 82) 43

USSR

Deputy Minister of Communications on Radio Day
(Gennadiy Georgiyevich Kudryavtsev Interview, Moscow Domestic Service, 7 May 82) 45

Newspaper Facsimile Transmission Described
(A. Gusev; SELSKAYA ZHIZN', 7 May 82) 47

Briefs
TV Relay Station 49
Moskva Station 49
'Cosmos-1366' Launched 18 May 49

WEST EUROPE

INTERNATIONAL AFFAIRS

Progress Toward Joint Nordic TV Satellite Examined
(Arja Laitinen; SUOMEN KUVALEHTI, 2 Apr 82) 50

FINLAND

Government Broadcasting Agency Regrets Cable TV Start
(Martti O. Hosia; SUOMEN KUVALEHTI, 2 Apr 82) 53

Minister Attacks Agency for Allowing Satellite-TV From UK
(HELSINGIN SANOMAT, 9 Apr 82) 60

FRANCE

Names, Users, Functions of Data Banks Subject of Study
(Gilles Coville; LE NOUVEL ECONOMISTE, 15 Mar 82) 63

BRIEFS

MOZAMBIQUE, CUBA COOPERATION--Under the agreement signed last year by Radio Mozambique and the Cuban Institute of Radio and Television, six Cuban cooperation workers for Radio Mozambique are expected in Mozambique this year. The exchange of radio programs will also increase. This was disclosed in Maputo today by the vice president of the Cuban Institute of Radio and Television, Jose Rodriguez Llaneras, shortly before his departure for home. Jose Llaneras expressed his satisfaction following contacts with Radio Mozambique and said Cuba will send monthly interviews given by Mozambique students studying in Cuba for broadcast by Radio Mizambique. [Text] [EA110200 Maputo Domestic Service in Portuguese 1030 GMT 10 May 82]

USSR, KAMPUCHEA BROADCAST ACCORD--Today for the first time a long-term agreement and protocol were signed in Moscow on cooperation in radio broadcasting between USSR state television and Radio and radio Voice of the People of Kampuchea. They provide for an exchange of radio material on the life of the peoples of the USSR and the People's Republic of Kampuchea and reciprocal assistance in preparing program on major events in the life of the two countries. The documents were signed by Yuriy Viktorovich Orlov, deputy chairman of the USSR Committee for Television and Radio Broadcasting and (Van Sun Heng), acting general director of Radio Voice of the People of Kampuchea. [Text] [LD301118 Moscow Domestic Service in Russian 1000 GMT 30 Apr 82]

BROADCASTING ACCORD WITH KAMPUCHEA--Budapest, 13 May (MTI)--A 5-year cooperation accord was signed by Jozsef Bocz, vice-president of Hungarian Radio, and Van Sunheng, deputy director-general of Kampuchean Radio, here today. The document provides for exchanges of political, economic, cultural and musical programmes, mutual visits by radio crews, technical assistance and reciprocal commemoration of national days. [Text] [Budapest MTI in English 1733 GMT 13 May 82]

'KCNA',BANGLADESH AGENCY AGREEMENT--Pyongyang, 16 May (KCNA)--An agreement on news exchange and mutual cooperation between the Korean Central News Agency and the Bangladesh News Agency was signed in Pyongyang on 15 May. It was signed by Kim Song-kol, general director of the Korean Central News Agency, and Abul Hasehm, director general and chief editor of the Bangladesh News Agency. [Text] [SK160921 Pyongyang KCNA in English 0853 GMT 16 May 82]

USSR, FRG BROADCASTING PROTOCOL--In Moscow today a protocol was signed for 1982 on cooperation between the USSR State Committee for Television and Radio and West German Television and Radio. Relations between the two organizations are being expanded. Exchange of television and radio materials and the shooting of television programs on major events in the life of the USSR and FRG are envisaged. The protocol was signed by Chairman of the USSR State Committee for Television and Radio Lapin and Director of West German Television and Radio Huebner. [Text] [LD191740 Moscow Domestic Service in Russian 1500 GMT 19 May 82]

HUNGARIAN-KAMPUCHEAN COOPERATION ACCORD--Phnom Penh, 19 May (SPK)--A cooperation accord between the Hungarian and Kampuchean radio stations was signed recently in Budapest (capital of Hungary). Under the terms of this 5 year accord, which was concluded at the end of the visit to Hungary by Van Sun Heng, deputy director general of the Radio Voice of the Kampuchean People, the radio stations of the two countries will exchange political, cultural and musical programs and the experts. [Text] [BK200724 Phnom Penh SPK in French 1436 GMT 19 May 82]

'TASS,' TUNISIAN AGENCY COOPERATION TREATY--Moscow, 18 May (TASS)--A treaty on cooperation between the News Agency of the Soviet Union (TASS) and the Tunisian News Agency--Tunis Afrique Press (TAP) was signed in Moscow today. Fitting into the framework of the existing inter-governmental agreements on cooperation between the USSR and Tunisia in the sphere of culture, the treaty envisages establishment of a direct bilateral communication line and expansion of the information exchange between TASS and TAP and also determines forms of professional cooperation between the two news agencies. The treaty was signed by the TASS Director-General Sergey Losev and TAP president, General Director (Beshir Tual). Ambassador of Tunisia in the USSR Mohamed Habib Cherab, who attended the treaty-signing ceremony, highly spoke of its significance. He described the treaty as an important contribution to consolidation of inter-state relations between Tunisia and the Soviet Union. [Text] [LD181900 Moscow TASS in English 1822 GMT 18 May 82]

CHINA TO HELP TUNISIA--Dar es Salaam, 18 May (AFP)--China will help Zanzibar's government build a 60-kilowatt short-wave radio station to enable the island's radio programmes to be heard outside Tanzania, it was reported here today. The project, the details of which have not been made public, would be carried out by Chinese experts. Twenty-one of the experts have already arrived in Zanzibar, and 29 others were expected later. The new radio station is being built under a bilateral agreement, which calls for Zamzibar to meet the local costs for the project, the island's information and broadcasting minister, Issa Mohamed, said. Mr Mohamed also said there were plans to build a 50-kilowatt medium-wave radio transmitter to replace an ageing station that was unable to effectively serve the whole country. [Text] [AB181457 Paris AFP in English 1425 GMT 18 May 82]

MOSCOW TO LAUNCH INDIAN SATELLITE--The Soviet Union which put into orbit three Indian-made satellites during the past few years is to launch another Indian-built satellite in the mid-1980's. An agreement to this effect was signed in Moscow yesterday between a team of Indian experts led by Dr Satish Dhawan and a Soviet space agency. [Text] [BK220935 Delhi Domestic Service in English 0830 GMT 22 May 82]

CSO: 5500/2228

BRIEFS

'XINHUA,' 'KCNA' NEWS EXCHANGE ACCORD--Pyongyang, 30 Apr (XINHUA)--An agreement on the exchange of news and cooperation between XINHUA and the Korean Central News Agency (KCNA) was signed here today by Deng Gang, deputy director-general of XINHUA and head at the visiting XINHUA delegation, and Song Pong-sun, vice-director of the KCNA. XINHUA and KCNA signed a similar agreement in 1960. Before the signing ceremony, the Chinese XINHUA delegation had been received by Chong Chun-ki, alternate member of the Political Bureau of the Central Committee of the Workers' Party of Korea and vice-premier. The XINHUA delegation arrived here on 13 April. It will leave for home tomorrow. [Text] [OW301312 Beijing XINHUA in English 1209 GMT 30 Apr 82]

DATA NETWORK ACCEPTED--A New Zealand concept of an information network around Asian and Pacific nations has been accepted by a 29-nation conference sponsored by the United Nations in Manila. The concept was put forward by the Minister of Science and Technology, Dr Shearer, at a ministerial conference on the application of science and technology in Asia and the Pacific. Dr Shearer said the network would be set up by linking the computerised information services of member nations. Planning of the project had been entrusted to the United Nations Economic Scientific and Cultural Organisation, and a meeting was planned towards the end of the year, said the minister. New Zealand's Scientific and Technological Information Service, a computerised service run by the Department of Scientific and Industrial Research, already has links with its counterpart in the United States. The Australian equivalent is known as the Commonwealth Scientific and Industrial Research Organisation. The project could involve building an information centre for the region. [Excerpt] [Auckland THE NEW ZEALAND HERALD in English 5 Apr 82 p 4]

CSO: 5500/9029

OPPOSITION LEADER SAYS GOVERNMENT WITHHOLDS FUNDS FROM TELECOM

Brisbane THE COURIER-MAIL in English 5 Apr 82 p 12

[Text] CANBERRA--The Federal Government was accused yesterday of deliberately restricting Telecom's access to borrowing on the money market, creating serious shortages of funds for development.

The Federal Opposition Leader, Mr Hayden, in his weekly radio braodcast, said Telecom was being denied adequate access to long-term borrowings and was trying to pay for necessary capital expansion from its own revenue.

Mr Hayden said six years ago Telecom funded its operations on the basis of 55 percent from revenue and 45 percent from loans.

"Now it raises only 27 percent from borrowings and a massive 73 percent from its own revenue," he said.

This was "extremely high" in comparison with telecommunications operations in other countries, other Australian public enterprises and private firms.

"The losers in this exercise are the Australian public," Mr Hayden said.

"Existing telephone subscribers and users have to pay a lot more than they should, and Telecom is less able to expand into new services or to extend existing services."

"For example, Telecom now has great difficu-ty in meeting demand for new telephones, particularly in coastal New South Wales and growth areas in Queensland."

He claimed the current borrowing restirctions imposed by the Fraser Government would lead to higher charges.

"Already, government policies have caused a serious rundown in Telecom's ability to operate an efficient and modern communications system," he said.

"Clearly the next step under Mr Fraser's mismanagement of Telecom will be a new round of higher telephone charges and fees which will penalise all Australians, particularly country people."

CSO: 5500/7536

BRIEFS

SATELLITE COMMUNICATIONS SYSTEM--The federal government has given the go-ahead for the national communications satellite system which should dramatically improve television, radio and telephone service throughout Australia. The minister for communications, Mr Sinclair, told Federal Parliament the system should be operational by mid-1985. He said the government expects to have two satellites launched by the United States space shuttle or Delta rockets by mid-1985. An American firm, Hughes Communications International, has won the contract for the three [as heard] satellites and two ground control stations together with launch arrangements and launch insurance. Aussat PTY Ltd, the company formed by the government to own and operate the satellite system, won't have exclusive use of it. Mr Sinclair told Parliament private organizations would be free to establish their own earth stations to gain access to the satellite. [Text] [BK051215 Melbourne Overseas Service in English 1130 GMT 6 May 82]

SATELLITE COMMUNICATIONS CONTRACTS SIGNED--Contracts worth $166 million have been signed for Australia's planned domestic satellite, Aussat. The contracts are with the Hughes Aircraft Corporation of the United States. They provide for three satellites and two tracing and control stations. The chairman of Aussat, Mr (Stan Owens), said the satellite would mainly benefit people in isolated rural areas. [Text] [BK181100 Melbourne Overseas Service in English 0830 GMT 18 May 82]

CSO: 5500/2228

GOVERNMENT'S TELEVISION POLICIES DISCUSSED

Boring Programs Termed Problem

New Delhi INDIA TODAY in English 31 May 82 pp 26-32

[Article by Sumit Mitra and Anita Kaul]

[Text] *1984. It is a television boom the like of which India has never seen. From the slopes of the Malabar Hills in Bombay, to lush green pastures of Partapur near Meerut and the sprouting urban jungle of New Delhi's Defence Colony, the fashionable New Alipore area of Calcutta and the trusty old Anna Salai Road of Madras, it is the same spectacle of thousands of TV aerials sticking up in haughty silhouette.*

The Indian channels are humming with cascading electromagnetic waves—some skimming along the earth, others ricocheting back from the two truly Bharatiya pies-in-the-sky hovering 26,000 km above the ground. Giant microwave towers have been set round the nation like stiff giants.

The TV commercial section never had it so good. The three daily Chitrahaars, with three 10 minute slots on sale, are each fetching Rs 2,000 per second. All film-based programmes command 95 per cent viewing. But, since no non-film programme is viewed by more than 5 per cent, the prime minister's daily appearance on screen has to be timed between the Chitrahaars.

THE SCENARIO is comic, conjectural, satirical, emphasising the dark side to the millennium; but it is not one bit improbable. Rolling itself out of a Rip Van Winkle slumber, the Government is suddenly rushing to make up for lost time in expanding the tentacles of Doordarshan. The sizeable swelling of Doordarshan's budget in 1980-81 to 1982-83 (Rs 5 crore to Rs 14 crore) reflects the will, the determination and the tenacious effort of the Information and Broadcasting (I & B) Ministry to find resources for the state-monopoly television network's mushroom growth.

The list of projects on hand, which have been recently completed or are nearing completion, makes impressive reading. Most of them are in the form of long-term investments in electronic hardware, and Doordarshan engineers are working overtime along with their counterparts in the Indian Space Research Organisation (ISRO) as well as the Posts & Telegraphs (P & T) Department, to realise a grand vision of the Indian global village.

Vasant Sathe, 57, the ebullient I & B minister, is currently calling the shots in nearly all matters of hardware expansion. If the plans go according to schedule, by the end of the year microwave circuits capable of two-way picture transmission will skirt the country linking Madras, Bangalore, Bombay, Jaipur, Kota, Delhi, Lucknow, Kanpur, Patna and Calcutta. Later, the microwave circuit will meander right back to Madras, taking in its stride Bhubaneswar and Hyderabad.

Quantum Leap: The microwave linkage will firstly eliminate the physical difficulty in sending and receiving pictures between two stations simultaneously. So, technically, there will be fewer difficulties in showing live coverage of events at all centres connected by the linkage at the same time. This is surely the germinal point of a national hook-up. Simultaneously, INSAT-1B, the earth satellite which will go up on the heels of INSAT-1A, will have, like its predecessor, two transponders beaming to every square inch of Indian territory every picture transmitted.

These beams can then be strengthened by a string of low power—and low cost—relay transmitters for channeling through home TV sets. "The pictures will be extremely good and can be picked up throughout the country," says U.R. Rao, director of ISRO's satellite centre at Bangalore.

On the threshold of the colour age, by end 1983, 120,000 homes will brighten up with colour TV and makers of colour TV sets are cheerfully predicting sales of 10,000 sets every year. Said Sunder Vachani of Weston Electroniks: "India is a large, untapped market for colour TV. It is a pity that the Government did not wake up to it till very recently." There is a large rainbow-coloured bubble looming in front of the TV industry today. Will the bubble burst?

It has to. By a quirky political decision, the bumbledom of Doordarshan is all of a sudden saddled with the onerous task of having to generate software three to five times more than at present. In plain words, the Government's Leviathan which runs the country's television network will have to gear itself to finding eight hours of programmes a day instead of the average four now and keeping its audiences hooked. There will be hook-up programmes for the entire country, two-way microwave exchanges between stations and on-going needs of terrestrial (local) stations as well. To all intents and purposes, it is a quantum leap, the biggest ever in Indian broadcasting. It is also likely to be a leap in the dark.

The haphazard rise of Indian television has come to symbolise one aspect above all others: that the "idiot box" confirms not the idiocy of its viewers but its originators; that Doordarshan's sole achievement in its two decades of existence has not merely standardised mediocrity but institutionalised it; And that today, on the brink of its Great Leap Forward, it is as far removed from its charter of providing education, information and entertainment—in that order—as it can reasonably expected to be in the year 1985. For as the humblest, but nonetheless avid, viewer of Doordarshan's telecasts will confess: the nightly spectacle is neither particularly edifying, nor informative, and the only entertainment worth watching is when the Bombay movies come on. As one cynical observer points out: "Indian television's only noticeable achievement has been that it has emerged as the newest poor relation of Bombay's commercial cinema." For education, Indians continue to depend on their sages, for authentic news and information on newspapers and perhaps the BBC overseas service, and for entertainment on Hindi films or excerpts from them

Bare Facts: Shailendra Shankar, Doordarshan's balding and none-too-assertive director-general, is therefore naturally reticent about how exactly he is going to fill the air hours as the network expansion begins to send its after-shocks down the production line. And at a conference of Doordarshan station directors held in New Delhi last fortnight, it was manifestly clear that the authorities, from Sathe downwards, had little idea of how to fill the increased programme timings. The realisation that, however belatedly, dawned on the TV bosses was that:

- not a single non-film based and non-sports programme compels more than half of the country's 1.3 million TV set owners to switch them on;
- there is no way of increasing transmission time or improving the quality of transmission without earning more;
- the key to higher revenue is to have more film-based programmes;
- The total duration of film-based programmes put out by Doordarshan now, is seven and a half hours a week, of which the Bombay film industry alone accounts for nearly three hours 45 minutes. There are plans for increasing transmission time to nearly eight hours a day, including the second commercial channel to be introduced in Bombay. The other plan is to begin a second Chitrahaar/Chhayageet (a string of song and dance sequences from Hindi films), consisting of chunks from current billings in movie theatres and charging producers Rs 5,000 per song for the extra mileage such a broadcast offers in terms of box-office sales. The present practice is to pay producers Rs 250 for each song presented in Chitrahaar.

Doordarshan has every reason to hobble along on the crutches of the film industry. Its own TV Audience Survey, published in December last year, brings out the programme "rating" (the percentage of TV sets actually switched on) of each programme put out by each station It shows the pathetic tilt towards films and the abysmally low ratings of Doordarshan's own general programmes. In Delhi, for instance, as few as three sets are turned on per 100 sets when the weekly 30-minute programme for industrial workers, Hamare Kamgaar Hamare Udyog is on the air.

The rating for Krishi Darshan, the rural programme put out five times a week, wavers between just four and just two per cent. The 13 to 15-minute documentary made on developmental themes, is watched by only 10 per cent of viewers; the news in English by 13 to 15 per cent on a week-day; the magazine programme on science by a modest 29 per cent and the Saturday children's programme by a rock-bottom 2 per cent.

Popular Programmes: On the other hand, Phool Khilen Hain Gulshan Gulshan, the interview of Bombay film personalities —an unabashed plug for them—laced with syrupy smiles from its popular hostess Tabassum, had a cheerful rating of 68 per cent in Delhi and a dizzy 83 per cent in Bombay. The weekly Hindi film drew 84 per cent in Delhi, 81 per cent in Bombay and 73 per cent in Calcutta. Chitrahaar was rated 84 per cent in Delhi, 86 per cent in Bombay, and 81 per cent in Calcutta. It was indeed the tail that wagged the dog. Said J.M. Singh, controller of commercials, Doordarshan: "We do have difficulties in selling slots other than film slots. It's tragic, but that is the reality of Doordarshan."

The whole point of stretching out on the film-based programmes now is to carve out more and more of such highly profitable (super A) prime time slots as the 10 minutes preceding Chitrahaar fetch a cool Rs 400 per second and is likely to go up soon. Recently, there were rumblings at Doordarshan that some smart executives had really been arranging advertisements within the slot so that they had a still higher "recall value", thus carving out an unofficial super A1 slot. In Delhi there is a scramble to buy blocks of super A prime time and then sell them, often at a 100 per cent premium.

Thanks entirely to the popularity of film-based programmes, Doordarshan's advertisement revenue, which was Rs 4 crore a year ago, is likely to touch Rs 16 crore at the end of this year. All of a sudden Doordarshan's cash register had started ringing and the advertising agencies have woken up to this new and untapped medium. Muses Sathe: "Let us earn more from TV so that we can spend more on development." Echoing Sathe's view, Suren Chawla, media controller of the country's top billing (Rs 80 crore) advertising agency, Hindustan Thomson Associates, says: "Film and film-based programmes have to be on top in TV. As a media man the importance of films sometimes frightens me. Films sustain television and radio. Take films away and both will collapse."

The strategy may be workable, but not all media pundits support Sathe and Chawla. Says Iqbal Malik, a former deputy director-general of Doordarshan, whose scathing newspaper columns on Doordarshan are one of the I & B Ministry's major sources of insomnia: "It is ridiculous that Indian broadcasting, after 55 years, is as subservient to the film producers as those film extras are. Doordarshan is mortgaged to the Bombay film industry and the bureaucracy of Shastri Bhavan (which houses the I & B Ministry) in that order." Ridiculous but inevitable for an outfit which in ostrich-like fashion shunned commercialism till six years ago and is now belatedly trying shortcuts. And the appalling boredom induced by most Doordarshan programmes is indicative of the long distance that must be travelled.

WHY DO Doordarshan's non-film programmes put people off? Elucidates Amita Malik, Iqbal's wife and a veteran film and TV critic: "The Doordarshan shows are poor not because the subjects are always poorly chosen, but because nobody makes any effort to present them with imagination." Her weekly columns in *The Times Of India* which now appear in the *Indian Express* called Sight and Sound chronicle the ham-handedness of the men and women who put out programmes on the box. The prickly column recalls a continual string of goofs; the newscaster girl who spoke Hindi till the other day, pronouncing mausoleum as ma-say-os-leem-um; Sathe hogging TV time himself on the pretext of holding some sort of a Diwan-e-am with teleclub members; viewers' letters being sifted to keep the unflattering ones out; Sunday films being chosen to favour the current billing of a *sarkari* film maker who is on the board of the National Film Development Corporation (NFDC).

The list goes on and so do the excuses by Doordarshan and the ministry. Sathe in his characteristic cocksure manner reels out the reasons which are, according to him, dearth of proper equipment. He has a point there. The hardware problem is all-embracing in Doordarshan. Says news producer Harsaran Bir Kaur: "Working here is almost a miracle. It's like shooting *Star Wars* in Edison's studio." Kaur is hardly exaggerating. Doordarshan studios all over the country are dungeons which look more like junkyards than cradles of creativity.

At the Bombay Doordarshan Kendra there is just no fixed place for rehearsals, despite the stream of entertainment programmes churned out by the centre, and which need to be painfully rehearsed. Senior Producer B.K. Giri sits in a 4 ft by 5 ft cubby-hole, Assistant Director Yakub Syed sits in a converted passage boarded up with plywood. There are no sound recording facilities and artistes record sound one day and then when a studio is available are taken to the Kendra, where they mouth the songs so that the sound-track can be grafted on to the film later.

In Calcutta the Doordarshan Kendra is located, since its inception seven years ago, in a condemned studio which used to roll out technically inferior films. It is a minor miracle of broadcasting that the whole station has been operating all these years from an outstation broadcasting (OB) van. The transmitter tower is yet to be rigged up.

Bureaucratic Sway: Everywhere in Doordarshan the babus hold sway. By a bureaucratic fiat, the use of portable lights (sun guns) has been banned on outdoor day assignments. What does a producer do when the aesthetics of his art require a subject to be back-lit? "Wait till the sun actually dips, or rises the next day, depending on where the subject is," says Kamaleshwar, former additional director-general of Doordarshan whose services were recently terminated. Newscasting at Doordarshan is oddly studio-bound, and a big yawn generally because its 103 news stringers do not turn in adequate footage. They take it easy because Doordarshan pays the abysmally low rate of Rs 8 per foot of non-synchronised film.

Foreign visuals are almost non-existent, because Visnews, the London-based TV syndicate to which Doordarshan subscribes, has switched entirely to three-quarter inch video transmission of pictures as against its earlier practice of hooking across film pictures to India. But since Doordarshan did not acquire the receivers, despite being forewarned about it as far back as 1980, transmission of foreign pictures has totally stopped since April 1, this year. The 30 minutes of newscasting are static, non visual, and almost an extension of the All India Radio (AIR) news. It is really so because Doordarshan news, by a strange convention, is written in AIR's newsroom, with no feel for the visible twitch of the facial muscles, the smile, the dramatic movement of the eyes and heads—in short, the video perception.

Doordarshan isn't much more imaginative in dealing with independent documentary and programme makers who, in a country abounding in celluloid talent, could enrich its programmes no end. Yet, there is a criminal neglect of individual, non-staff talent. "The Doordarshan people cannot hope to improve the quality of their programmes as long as they stick to their present style of functioning," says S.S. Oberoi, managing director of the Bombay-based Art Commercial which specialises in making ad films and TV commercials. What Oberoi has in mind is Doordarshan's going rate for commercials, which can be as high as Rs 24,000 a minute, compared with the miserly Rs 60,000 to Rs 70,000 they pay for a 10 to 15-minute feature programme. If a one-minute commercial can cost several lakhs to produce, "How can they expect good quality programmes at that price? You can't be rigid in a field like showbiz. One documentary may take one day, another may take six months. They have to be practical if they want to get better people, better programmes and better facilities."

Doordarshan's bureaucracy allows little talent or creative instincts to survive. There are few chances for people who are chosen for posts at the production or the organisational level to create, or for that matter, organise anything even remotely presentable. The salary scales for "staff artistes" are abysmally low, consequently inviting little talent or creative faculty. Their basic requirement for artistes is an arts degree with an "artistic background".

The hierarchical structure in Doordarshan, with its corresponding salary scales, itself provides an insight into the material at hand for producing presentable software. Starting off with the director and the assistant station director, who are selected through the UPSC examinations and receive a salary of Rs 2,200 and Rs 1,600 respectively, pay scales dip dramatically at the actual creative level, which is several rungs below. Producers of programmes earn Rs 900 with production assistants getting a meagre Rs 600 per month. A cameraman draws Rs 800 and so does a technical man like the film editor or sound recordist. A glamorous post like that of a casual newscaster would fetch an embarrassing Rs 75 per reading. Television in India is not exactly a haven of high incomes.

The crux of the matter is that Doordarshan, which could easily become the most creative, influential and exciting of institutions, continues to run like a slack, inexorably slow and malfunctioning government department, no different from the local passport office or a government-sponsored super bazaar.

Its bureaucratic, suffocatingly *sarkari* machinery is controlled by the same file-pushers, influence-peddlers and self-seekers that crawl out of the woodwork of any other ministry; the corridors of Akashvani Bhavan in New Delhi—or any other centre—are occupied by the same puny, gutless babus desperate to ingratiate themselves with their political bosses, obsessed with their salary grades and allowances, and hopelessly tangled in their intrigues of self-promotion that have come to represent the entire government enterprise.

Divided Staff: Doordarshan is run by a set of people straight out of a Kafkaesque bureaucracy: faceless, purposeless, formless and utterly disheartening. By strange official rules, the production team of any Doordarshan programme is divided by a barricade—the engineering staff and the production staff, the twain that shall ne'er meet. Technically, the man who operates the dolly (the rail on which the camera moves) is engineering staff, while the cameraman belongs to production. What happens when the producer asks for the camera to dolly forward or backward? The cameraman stays a good two yards away from the camera because the dollyman won't let him touch it after it is placed on the dolly.

The sound recordist is production staff, but the mixer is not, so the recordist's duty ends after shooting because the engineering staff won't let him come near the instruments when mixing of sound tracks is being done at various levels. Doordarshan is as amorphous as a caste-ridden Indian village.

It is best evidenced in the posting of officials in Doordarshan. In the now-off, now-on appearance of an over-powerful additional director-general, in stagnation at middle levels and the spectacular strides of its well-connected officials. There is no provision for an additional director-general in Doordarshan, nevertheless Kamaleshwar was brought along and in course of time became the weightiest of mandarins in Mandi House, the unimpressive New Delhi Doordarshan headquarters. The official reason for the non-renewal of tenure is as prolix as a bureaucratic mind can think up: apparently, Kamaleshwar's papers had not been put up before the Union Public Service Commission (UPSC) in time. But Sethe, while taking to INDIA TODAY, coughed up the true answer. Said he: "Doordarshan treats a newcomer like a human body treats an invading germ. The body either throttles the germ or gets infected by it. In Kamaleshwar's case the germ was killed."

As far back as 1970, Doordarshan was separated from AIR and its director-general given the status of an additional secretary in the I&B Ministry. But, as an old Doordarshan hand said: "Their divorce seems to be still on probation." The entire top brass of Doordarshan, barring only two fresh entrants from the Indian Administrative Service (IAS), is drawn from AIR. Shankar is a living relic from the audio era and so is Chief Engineer R.B.L. Srivastava.

THE FAILURE of equipment and the grip of bumbledom is still a part, and only a part of the story. The more real failure is writ large on the human aspect of the organisation, whose 5,000-odd employees look upon themselves—and are looked upon—as just government servants. They somehow manage to put the Government's seal on everything they produce. A lot of freshers join Doordarshan bubbling with enthusiasm, but end up in the twisted corridors of the Government as lifeless puppets. A retired station director told the working group on the autonomy of broadcasting, headed by journalist B.G. Verghese, that he "joined Akashvani a fearless man, but retired a timid person". This is equally true of Doordarshan.

Their programmes are naturally of two kinds: downright banal or prostrating to the Government of the day. Just how banal a Doordarshan programme can get was evident from a documentary shown on the summer exodus and the railways put out by the Delhi station on May 10. Two tense-faced railway bureaucrats with double chins did all the talking at the speed of express trains. Within 10 yards of the office there must have been a thriving black market in seat reservations. But that is controversial and Doordarshan wouldn't touch it with a barge pole.

Indian TV avoids controversies because, as Verghese said, "It's afraid of the real issues. It broadcasts only such news which is safe for the Government of the day." Thus the news of Maneka Gandhi's expulsion from the prime minister's house was ignored (*see interview*). Thus the Antulay *faux pas* went unreported until its waves lapped the walls of Parliament.

Dynamic Broadcasts: It's hardly surprising then to find a steadily rising popularity in India of TV broadcasts filtering in from neighbouring countries. The three neighbours with strong station signals—Pakistan, Sri Lanka and Bangladesh—have all evolved a system of lively, visually-oriented, dynamic broadcasts. Even a small network like Bangladesh subscribes to two international TV syndicates—Visnews and Columbia Broadcasting Service (CBS)—while India takes just one, Visnews. Transmissions from Dacca are extremely popular in Calcutta, where many TV owners have fitted their sets with booster antennae (price: Rs 1,500). News from Dacca is accompanied by satellite-transmitted films, say, of Sadat's assassination, obtained through CBS link-up.

Pakistan TV broadcasts are watched in border districts of Amritsar, Ferozepur and Jammu, as well as Jullundur, Kapurthala and Simla. The signals are visible, with the help of booster antennae, as far as 150 km into Indian territory. The Pakistani programmes rich in Urdu humour, such as *Fifty Fifty* and *Bade Mian*, are extremely popular in India. The only reverse traffic is Indian films and film-based programmes.

In Madras, Doordarshan officials may soon be the only ones watching the TV programmes, as a wag quips. Sri Lanka TV, with its special broadcasts in Tamil, English and Hindi, called *Rupavahini*, has dominated the TV scene. As distinct from Doordarshan's hash of programmes, Sri Lanka broadcasts Tamil plays, classical music, old Tamil films and the latest films in English, Hindi and Tamil—all in colour.

Madras film producers are perturbed by the popularity of *Rupavahini*. Said one: "It is the biggest threat to the Tamil film industry because it beams the latest Tamil films." Last month the NFDC Madras branch, protested to Sri Lanka TV and there has been a suspension of Tamil films.

Interference: Yet, the whole machinery of Doordarshan, under its veneer of neutrality, often serves as a crude propaganda tool of the party in power. On February 16 this year, Mrs Gandhi addressed a rally at Brigade Parade Ground in Calcutta. Union Energy Minister A.B.A. Ghani Khan Chaudhury, a worthy from West Bengal, who had been present at the rally and later saw a 30-minute show of it on Calcutta TV, burst out in anger to find that the crowd scenes had not been adequately shot. He got in touch with Sathe and hey presto, the producer was shifted to a non-news department.

Later on, the Calcutta TV Station Director, Shiv Kumar Sharma, decided to blacklist its stringer Durgadas Chatterjee, who had covered the occasion. His letter to Chatterjee, dated March 1, 1982, and marked "confidential" D.O. No. Cal-TV 2 (N)/82-PM, knocks the bottom out of Sathe's specious argument that Doordarshan is free from political interference. Sharma showed the way: "You had been specifically briefed by our producer to provide sufficient footage of shots of the big crowds assembled for the meeting. Except for one shot, that too of a small section of a crowd, the roll exposed by you contains only the arrival and dance reception given to the prime minister." A significant charge!

Yet more appalling instances, albeit recent ones, of Doordarshan's slavish eagerness to please the powers that be or play it safe include a total black-out of the Maneka-Mrs Gandhi episode, a peremptory dismissal of one of its popular, freelance English newscasters, Komal G.B. Singh when she became involved in a totally unrelated dispute with Delhi Police (her services had to be restored at the behest of Sathe himself), and once again a noticeable lack of the Opposition's campaign in the forthcoming Assembly elections.

So supine is Doordarshan, so complete and octopus-like is the stranglehold of the Government on it, that it readily surrenders its role as an information medium. Last March, it sent its most senior newsman with Mrs Gandhi on the trip to London. At her press conference, the correspondent was conspicuous for not asking a single question. Reason: radio and TV correspondents are government officers first, and cannot ask questions to the head of the Government.

Vexing Problem: All this, of course, leads to the vexed question of the autonomy of Doordarshan and AIR. Mrs Gandhi herself provided the answer when she reiterated recently that the aim of her Government was to ensure "improvement in the quality of programmes" but that the broadcasting agencies should stay under the control of the Government. However, the election manifesto of the Congress(I), Mrs Gandhi's triumphant party, despite paying lip-support to the freedom of the press, did not contain a word about AIR and Doordarshan. Later on, the media advisory committee was appointed, headed by former diplomat and Mrs Gandhi's freewheeling aide G. Parthasarthy to advise the Government on bringing about structural changes in radio, television and film units "under the ministry of I&B". "Under" is really the catch-22 word, and the Parthasarthy Commission's brief falls far short of removing it.

Yet Sathe's money-making promises are a shade starry-eyed, if not prone to disastrous consequences. The stations, the lone network and the main producers of programmes – the entire network – are all under the sprawling umbrella of the Doordarshan administration. The obvious pitfall for a monopoly television agency trying to commercialise itself is that it will abdicate its social responsibility. Yet the two are not incompatible ends. Some of the most successful TV around the globe is entertaining and educative, a workable mix of education, information and entertainment.

Forgotten Promises: The Verghese Committee, in its marathon two-volume report showed the way for making broadcasting viable without surrendering its basic obligation to the society. It recommended the creation of an autonomous corporation, Akash Bharati, and suggested that the freedom of broadcasting should be regarded as freedom of expression and be enshrined in the Constitution as a part of the catch-all Article 19 (A). However, the very Janata government which appointed the Verghese Committee went back on its promises and brought before the Parliament a watered-down version of the committee's report.

Apparently political parties never intend to part with control over media as important as radio and TV. Last fortnight, when the British Foreign Secretary Francis Pym publicly cribbed about the British Broadcasting Corporation (BBC) showing the Argentine viewpoint as well in its coverage of the south Atlantic war, the BBC Managing Director, Richard Francis, quietly reminded him that "it is not the BBC's role to boost British troops' morale or to rally British people to the flag."

For the babus filling the corridors of Doordarshan, such sentiments will be utterly beyond comprehension. Said N.L. Chowla, head of the television working group of the Government-appointed Media Advisory Committee: "The present Government never pledged to make broadcasting autonomous; so this is not even being considered at any level."

Against such a bleak background, the commercial push of Doordarshan might eventually throw up the Hobson's choice between the video ghosts of Lata Mangeshkar or Mrs Gandhi. Sathe can at best splash them in the lurid colours of his own fantasy.

State Control of TV Criticized

New Delhi INDIA TODAY in English 31 May 82 pp 28-29

[Interview with Vasant Sathe, information and broadcasting minister, by Sumit Mitra: "Our Ethics Are Different"]

[Text] *VASANT Sathe, the Union Information & Broadcasting minister, is a man of impeccable etiquette. He is also a modern man who loves all sorts of gadgets, including colour TV and video recording instruments. He is ready to go along with even his critics, but is tough and unyielding when it touches his basic belief that the broadcasting media should remain a part of the Government. Sitting in his New Delhi bungalow,* INDIA TODAY *Correspondent* SUMIT MITRA *spent three hours chatting with him on wide-ranging issues. Excerpts:*

Q. *A lot of people, both within and outside the Government, say that you are pursuing questionable objectives, such as colour TV. Any comment?*

A. Yes, I am aware of the criticism though I don't know how much of it is informed or unmotivated. Before racking our brains over whether we should have colour TV, we must ask ourselves whether it was justified to have TV in the first place. My mind is absolutely clear on this. Our culture is an audio-visual culture; our traditions and rituals are all based on sights and sounds. In the past, communication took place through roving minstrels, through folk dance and music that demanded body action. Now, it is TV which has to be the main communicating medium. And, our critics should make a note here. TV all over the world today is synonymous with colour TV, just as airplanes are synonymous with jet planes.

Q. *But jet propulsion by itself did not increase the cost of flying whereas colour TV is a costly proposition and you are taking a quantum jump.*

A. Not at all. Just look at the cost. In foreign countries, you can buy a colour TV set with 20-inch screen off the shelf for as little as US $300 (Rs 2,700). Now, our manufacturers are capable of making TV sets here for only Rs 2,600, provided you remove taxes and other levies and let them import a tool kit of US $80 (Rs 720) for every set. But the Government somehow wants to earn at least Rs 5,000 for each set by way of taxes, and that escalates cost and restricts sale. I think our basic attitudes with regard to consumer electronics suffers from certain mental inhibitions.

Q. *Can you please explain that?*

A. You see, the four tiny island states of Taiwan, South Korea, Hong Kong and Singapore now export Rs 1,200 crore of consumer electronics whereas this land of 685 million people, having the world's third-largest concentration of technical personnel, does not export even 12 crore worth of consumer electronics. I have a feeling that the growth of consumer electronics in India has been systematically crippled by somebody somewhere.

Q. *Well, the prime minister is herself in charge of electronics.*

A. I am sorry to say that the prime minister has not always been correctly advised in this regard. But I don't want to restrict myself to electronics alone. What I mean to say is that communication has not received the required priority in this country. Be it colour TV, be it high-power transmitters for radio— the stock reply that I hear is: "OK. Sathe Saab, what you're saying is fine. But where is the money?" It is shameful that you can't hear the Bombay station from Calcutta, the Calcutta station from Madras, or the Delhi station from anywhere. If I don't have 1000 kilowatt transmitters how do I stop our people from listening to powerful broadcasts from neighbouring countries? Am I expected to stand on top of Mt Everest and blare out the message of Akashvani through a speaking horn?

Q. *With regard to television, what exactly are your plans?*

A. My plan is to make a VCR (video cassette recorder) with 10-foot projection facility available to each electrified village of the country by 1985. The colour TV is really the VCR monitor. Programmes can be canned and run through it, and, when projected on a 10 feet screen, at least 5,000 people can watch it. It will replace the cinema, which has just about 10,000 outlets. Once you have it you can literally bombard the mind of the public However to start with, we are going to have colour transmission as well as extension of programme time up to eight hours a day. There will also be a second commercial channel, in Bombay, to start with.

Q. *Very spectacular plans indeed. But what is the software with which you intend to reach the masses?*

A. Mostly our own programmes. School programmes during the day, rural education programmes during the early evening and entertainment-oriented programmes in the late evening. Even at this moment, Doordarshan has about 500 hours of software in cans.

Q. *Pardon me for saying so. But don't you feel that the 500 hours of software you are mentioning here may not conform to the idea of entertainment or instruction?*

A. (With a smile) Yes, you're quite right. Some of our programmes really have a dull format.

Q. *So you'll have a yawning gap between hardware and software.*

A. That may not be entirely true. One thing I did at the behest of Shrimati Gandhi was to go in for improvement of software. She gave me the most important suggestion that TV should go to the masses. Then the tele-clubs began, made of regular TV watchers. We began a process of evaluating their suggestions, and incorporating these in programmes.

Q. *Yet the programmes are dull and pointless. The newscasting is amateurish...*

A. Oh, these are technical deficiencies. There are very few visuals to go with news because we don't yet have ENG (Electronic News Gathering) cameras. After the microwave links and the satellite link-ups are complete, we shall have no difficulty getting visuals.

Q. *But I'm not talking about technical excellence. I'm talking about the Doordarshan's concept of news.*

A. What is wrong with that?

Q. *It projects only Mrs Gandhi and her party.*

A. That's not true. You are not the first person to say that either. I've worked it all out. On an average Shrimati Gandhi gets 1/15th of newstime on TV. But show me a national newspaper which does not allocate that much of front-page space to her every day.

Q. *Frankly I think she gets much more time on TV. Whenever she cuts a ribbon, flies in or out, meets visiting dignitaries, lays foundation-stones—the TV follows her.*

A. Because she is news. Because her cutting ribbons has an intrinsic news value. Because she makes policy statements very often. Because she draws crowds. And because the TV needs her more than she needs the TV.

Q. *OK, she is news. But what about her family members? Are they* [illegible]

A. Not as family members. On individual merit—yes. You must know why we did not cover the news of Maneka Gandhi's leaving her mother-in-law's house: because it was a strictly personal matter.

Q. *Do you think that broadcasting should enjoy autonomy in India?*

A. We want autonomy—functional autonomy. And the Doordarshan is already enjoying it. In day-to-day matters they have full discretion and absolutely no interference from the top.

Q. *Why does the Doordarshan avoid controversies?*

A. Well, just look at what the press is doing. Going by the press, the general impression one gets is that there is a total break-down in law and order in the country, that civilians are totally corrupt, that politicians are totally corrupt. This has a fragmenting effect on the country. There are forces of parochialism everywhere. If they have failed to break up this country, it is only because we have a charismatic leader like Shrimati Gandhi.

Q. . . . *and also because of the government-owned media's firm resolve not to report these things?*

A. You see, the newspaper-wallas report what sells. We don't want our media to be parts of a consumerist society. Your ethics and our ethics are entirely different. There are certain things we can never allow. We cannot allow programmes that incite violence and racial hatred just as much as we cannot allow liquor and cigarette ads.

Q. *But putting out scanty information about communal unrest often encourages rumours, which are worse.*

A. We really do not avoid controversies. We merely do not overplay them.

Q. *In 23 years of television broadcasting, we haven't had a single TV talent.*

A. Why, there are a lot of talents. That brilliant actress, Smita Patil . . . She was with TV.

Q. *She was and that's the whole point. She made her mark elsewhere, in the film industry. Why can't TV retain talents?*

A. Because we can't pay the kind of money the film industry can pay. But things are changing now. As you know, Satyajit Ray has made a film for TV. A lot of people objected to the film, but I've told everyone that Doordarshan must keep its gates open to talent from outside. I really want it to be the meeting point of all disciplines—art, sculpture, film, music, literature—all. And colour will really make all the difference. You see, the Nature is in colour, not in black-and-white. *Yeh bat in kambakhton ko kaise samjhaen?* (How can one explain this to idiots?)

CSO: 5500/5808

TELETEXT BROADCASTING SYSTEM CONSIDERED

OW141045 Tokyo KYODO in English 0010 GMT 13 May 82

[Text] Tokyo, 13 May (KYODO)--The Posts and Telecommunications Ministry is planning to enforce the teletext broadcasting system from fiscal 1983 beginning next April now that the Diet has passed the bill for revision of the broadcasting law.

The teletext broadcasting formula is a new information media in which a small space between wavelengths already allotted to TV broadcasting stations is used to send fixed images, such as characters. Under the system, news, weather forecasts, information on sports events and other matters can be telecast and received by TV receivers.

The bill for revision of the broadcasting law to make possible the practical use of the new system was passed by the House of Councillors on Wednesday. The House of Representatives approved the bill earlier.

The revised law is expected to be put into force in December.

Since the Japan Broadcasting Corporation (NHK) is planning to engage in teletext broadcasting at an early date, the new system is expected to make its debut in Tokyo and Osaka as early as in the summer of next year.

But commercial TV broadcasting companies are taking a cautious stand on adoption of the system due to technological reasons and some time is believed required before it is carried out on a nationwide basis.

The revised law also paves the way for third parties other than broadcasting firms to engage in teletext broadcasting.

In addition, it carries stipulations on restricting ownership of stocks in commercial TV broadcasting companies by foreigners.

CSO: 5500/2231

FERRITE RADIO WAVE ABSORBER DEVELOPED

OW141011 Tokyo KYODO in English 0451 GMT 14 May 82

[Text] Tokyo, 14 May (KYODO)--Nippon Electric Co. (NEC) said Friday that it had developed a highly efficient ferrite radio wave absorber, claimed to be the first of its kind in the world.

A company spokesman said that NEC would market the product at yen 100,000-150,000 ($425.53-638.29) per square meter within this year.

The new product has been developed to counter electro-magnetic wave interference in the private sector, but could be diverted for military purposes, he said.

The spokesman said that absorption is seven to 10 times greater than conventional high frequency range products since it can absorb 99 percent of the radio wave. It features a combination of transformer and absorber layers that collect radio waves, he said.

The transformer layer consists of ferrite and epoxy resin while the absorber layer is made up from short metal fiber and epoxy resin, he explained.

The spokesman said that the new product can, by changing thickness, cover the 1-20 gigahertz frequency range now being used in radar and microwave communications.

The United States and the Soviet Union have been developing radio wave absorbers for airplanes and ships.

Earlier, the U.S. State Department asked for samples from TDK Electronics Co., which has developed similar products.

The new product has been developed by NEC's Resources and Environment Protection Research Laboratory, the spokesman added.

CSO: 5500/2231

INTERNATIONAL GATEWAY EXCHANGE--PROGRESS REPORTED

Karachi DAWN in English 14 May 82 p 16

[Article by H. A. Hamied]

[Text] The International Gateway Exchange which was established in July 1980 at a cost of Rs. 120 million (foreign exchange component Rs. 50 million) is earning an average Rs. 12.8 million annually including the equivalent of Rs. eight million in foreign exchange.

It helps mature approximately 400,000 calls per month — 391,000 incoming calls and 86,000 outgoing calls.

According to Mr. A. R. Qureshi, General Manager, Overseas Telecommunication Region, about 24,000 telephone subscribers all over Pakistan are billed every month for overseas calls, and about 205 telephone operators, including 90 females, are providing the service. Additional staff is being recruited.

Expansion of the Gateway Exchange from the present 300 to 600 circuits is also planned.

Out of the present capacity of 300 international circuits, 280 are for automatic or semi-automatic service. The remaining 20 circuits are for manual service.

It currently covers 19 countries (212 circuits). Additional 130 countries can be contacted through these 19 countries.

International Subscriber Dialling (ISD) service is available at 24 exchanges for 14 countries. These are: Bahrain, UAE, West Germany, Kuwait, UK, Oman, Iran, France, Italy, Saudi Arabia, Singapore, Ireland, Switzerland and Japan.

ISD service to the United States is expected to be introduced by the end of June.

When the subscribers are unable to get the foreign destinations such as United States, they should not hesitate to seek help from top officials including himself, the General Manager said.

About the calls not maturing from Saudi Arabia to Pakistan, he explained it might be owing to heavy traffic.

Prior to July 21, 1980, the overseas telephone service was being provided by conventional manual trunk exchange at Karachi. Only 24,000 outgoing calls and 26,000 incoming calls were being handled each month. Under the new system, the incoming calls have gone up by 15 times.

Decision to provide ISD facilities was taken in late sixties but firm order could not be placed until June 1976.

Subscribers having NWD/STD facility telephone can book an overseas calls by dialling 0102. Inquiry in respect of such calls is 0104 during busy hours, about 16 positions are reserved for booking and inquiry.

About 25 circuits provide incoming facility to the subscribers of Karachi for making ISD calls and for booking/inquiry of their calls through operators. About 65 circuits can also be provided from other parts of the country for similar use.

Thus, out of a total of 190 circuits for ISD and booking/inquiry, about 16 subscribers can be attended to simultaneously for booking and enquiries, 16 others are given ring back tone and are placed in queue as soon as any operator's position is free. Beyond this, five subscribers are extended busy tone.

It is advisable to continue holding the line if ring back tone is heard. No indication is given to the Gateway operators for such subscribers waiting in queue, but they are connected to the operator on their turn in queue. Repeated attempts when ring tone is heard may cause excessive delays.

The charges for ISD service are lower and are counted on 1+1 minute basis as compared with 3+1 minute basis for operator service.

Booking and inquiry by subscribers not having NWD/STD telephone, may be done on 102/104 in Federal/Provincial capitals and on 109 at other stations where automatic exchanges are functioning.

CSO: 5500/5801

MONTHLY RADIO, TV MAGAZINE TO BE PUBLISHED

OW080115 Beijing Domestic Service in Mandarin 1200 GMT 5 May 82

[Text] The ZHONGGUO GUANGBO DIANSHI [CHINA RADIO AND TELEVISION] magazine, China's first comprehensive national monthly magazine to report and comment on radio and television, will start publication in July this year for public distribution at home and abroad. Subscriptions are now being promoted by post offices throughout the country.

The magazine will be sponsored by the Ministry of Radio and Television, edited by the editorial department of the ZHONGGUO GUANGBO DIANSHI, published by the Broadcasting Publishing House and distributed by the Beijing Newspaper and Periodical Distribution Bureau.

The ZHONGGUO GUANGBO DIANSHI will be characterized by its being ideological, informative and entertaining. It will be rich in content, varied in form, excellent both in writing and in pictures, and exquisitely and tastefully printed.

Its main columns will include: "Special Radio and Television Commentaries," "Radio and Television Review," "Radio Spring and Autumn" and "Television Historical Records" which will present historical facts on radio and television, "Radio and Television Personalities," "Radio and Listeners," "Television and Viewers," "Readers Forum," "Artistic Study and Appreciation," "Radio and Television Calisthenics," "International Radio and Television Window," "Radio and Television Trends," "Radio and Television Information," "Radio and Television Education" and others.

CSO: 5500/2228

NINGXIA EXPANDS TV BROADCASTING NETWORK

HK200751 Yinchuan NINGXIA RIBAO in Chinese 8 May 82 p 1

[Report: "Television Develops Rapidly in Ningxia"]

[Text] The Ningxia Hui Autonomous Region has made rapid progress in developing TV broadcasting over the past few years, establishing four high and medium-power TV relay stations and 20 low-power ones. Thus a complete TV broadcasting network has almost been set up in the region. In 1981, 76.6 percent of the regional population could watch TV, an increase of 28.5 percent compared with the rate in 1978. This has greatly enriched the people's cultural life in rural and urban areas.

Before 1978, TV broadcasts could be received only in Yinchuan Municipality and Dawukou County. But since 1979, the departments concerned have taken various measures in order to expand TV broadcasting in the region. They made use of the main lines of microwave communication to improve the work of relaying the programs of the central television station from Beijing. In addition, the regional government has made a financial allocation totalling 9.3 billion yuan in this area of work. In accordance with the geographic features of the region, the Ningxia Broadcasting Administrative Bureau rationalized distribution in setting up a TV broadcasting network in the region and took good care of the funds. Finally, the Ningxia television station was successfully rebuilt and expanded in Yinchuan District and some relay stations were set up in Shizuishan, Yinnan and Guyuan prefectures. All this has increased the broadcasting power and enlarged the coverage of the TV broadcasting network. In the past, the old Ningxia television station, being poorly equipped, could not broadcast too far; and its programs could be viewed only in Yinchuan Municipality, and Yongning and Helan counties. However, having been newly equipped since 1979, the Ningxia television station can now extend its broadcasts to many parts of Pingluo, Lingwu, Qingtongxia and Taole counties. Moreover, since the Luoshan TV relay station in Yinnan Prefecture went into operation, people now can get much clearer reception in Tongxin and Zhongning counties and in many parts of Wuzhong and Yanchi counties. In recent years, the municipal and county authorities and some enterprises in the region, with a total of 500,000 yuan of funds raised by themselves, have built up 20 low-power TV relay stations for improving the TV reception in some areas. Nowadays, from Baili gold mine in the north of the region to the high Liupanshan Mountain in the south, people can easily watch programs relayed directly from the central television station in Beijing. At the end of 1981, the Ningxia television station set up a new channel, providing more programs for TV watchers.

As a result of the expanded TV broadcasting network, TV sets are now in good demand. In the past few years, a total of more than 60,000 TV sets have been sold throughout the region. The sales volume from 1979 to 1981 was 10 times more than the total volume in the 8 years preceeding 1978. An incomplete estimate made at the end of 1981 shows that there are more than 34,000 TV sets in Yinchuan Municipality (including Yongning and Helan counties), that is to say, more than 60 percent of the families in these places have TV sets. Now people like to enjoy their leisure time by watching TV news and varieties of recreation programs. This facilitates the building of socialist civilization.

CSO: 5500/2237

BRIEFS

BROADCAST STATIONS--According to GUANGMING RIBAO, broadcasting stations have been set up in all of China's municipalities and counties. Seventy-two percent of the production brigades and 65 percent of the production teams have rediffusion facilities. Loudspeakers have been installed in 49 percent of the rural households, totaling approximately 90 million in number. Wire broadcasting is a major means of propaganda in the countryside. [Text] [OW141011 Beijing Domestic Service in Mandarin 0900 GMT 11 May 82]

CSO: 5500/2231

BRIEFS

RADIO THAILAND TRANSMISSION POWER--Radio Thailand will increase the transmission power of its internal service to 1,000 kilowatt beginning on 3 May. Public Relations Department Director General Kamchat Kiphanit says that the establishment of the transmitting station is aimed at providing better reception for people in the rural areas of the country. Radio Thailand has been broadcasting with a transmitting power of 100 kilowatt. The budget of about 126 million baht was spent on the setting up the station which is located in Saraburi Province. [Text] [BK301333 Bangkok Domestic Service in English 0000 GMT 28 Apr 82]

NEW TV TRANSMISSION STATION--A new colored television transmission station was officially opened on 25 April at Nakhon Ratchasima in the northeast of Thailand. This new transmission station will relay programs from the station in Khon Kaen Province through Channel 6 which can be received in Nakhon Ratchhasima and nearby provinces. This will enable the transmission of TV broadcasting by the Public Relations Department to cover all the 16 provinces in the northeast. The government's Public Relations Department now operates four television stations in the north, the northeast and the south of the country. [Excerpt] [BK301333 Bangkok Domestic Service in English 0000 GMT 27 Apr 82]

CSO: 5500/2230

WIDESPREAD USE OF CABLE RADIO REPORTED

Kathmandu THE RISING NEPAL in English 5 May 82 p 5

[Text] Hanoi--While some countries weigh the likely effects of cable television, Vietnam is trying to extend its cable radio network. Started in 1956 after the war against the French, the network now covers the whole of North Vietnam. Nearly every house has its set, linked through a village or commune centre to one of 60 local receiving stations over which comes news, propaganda, music, early morning exercise classes, drama, instructions and advice.

A strong local flavour is given by the commune relay which adds its own programming to the centrally produced material. In some places, reports and requests by the village committees are relayed over a phone linked to the cable to the district party or cooperative headquarters.

Ly Van Sau, director of the service, claims that Vietnam's recent good harvest is proof of the network's effectiveness. New methods of cultivation were used, farmers following instructions given over the cable and yields rose significantly, he says.

Radio has been part of Vietnamese life since it was started in the jungle over 30 years ago. Mr Sau was there. "We had two elephants and we used to load up the transmitter every morning and move. The French never found us. Afterwards the elephants got a medal." Radio Vietnam has been off the air for only nine minutes since then--on Christmas Eve of Dec. 24, 1972, the US bombing of Hanoi.

Cable was adopted as a low-cost alternative to a "wireless" system under which every family would have had to buy their own radio. Plans for expansion include extending the service to the southern provinces and more programming. A new unit has been set up to produce programmes on agriculture, health and family planning with the help of the United Nations Children's Fund (UNICEF) and the United Nations Fund for Population Activities (UNFPA). The unit will shortly set up sho in Ho Chi Minh City and expand its present offices in Hanoi. With UNFPA help, 30 trainees spent three months at the Development Training and Communications Planning (DTCP) in Bangkok.

TV will not be a big force in Vietnam for some time yet. It airs for only two hours in the evening from 7 p.m. to 9 p.m. and the most popular programmes are sports, beamed by satellite from the USSR or Eastern Europe. The local programming, especially drama, professionally acted and produced, suffers from poor facilities. Hanoi's TV studios are housed in a converted rice warehouse and a melange of equipment from all over the world.--Depthnews

CSO: 5500/5805

BRIEFS

'PAP'-'ADN' COOPERATION--Berlin, 29 Apr (ADN)--Agreements on the development of cooperation between the news agencies of the GDR and the People's Republic of Poland were signed in Berlin by the director-general of ADN and the editor-in-chief of PAP, Janusz Roszknowski. The head of the Polish News Agency was received for a friendly talk during his stay by member of the SED Central Committee, Heinz Geggel. [Text] [LD300418 East Berlin ADN International Service in German 1854 GMT 29 Apr 82]

CSO: 5500/2229

BRIEFS

NEW TRANSMITTER--On 12 May a new medium-wave radio transmitter was put into operation in the radiocommunications center in Brno-Komarov. It transmits the program of the Prague Radio Station on the 900 KHZ frequency, that is on the medium-wave 333.3 M. [AU151913 Prague RUDE PRAVO in Czech 13 May 82 p 2]

CSO: 5500/2237

WIEWIOROWSKA BOOK ON SATELLITE TELEVISION REVIEWED

Warsaw SPRAWY MIEDZYNARODOWE in Polish No 7, Jul 81 p 168

[Review by a. z. of book BEZPOSREDNIA TELEWIZJA SATELITARNA. STUDIUM PRAWNOMIEDZYNARODOWE [Direct Satellite Television. A Study in International Law] by Krystyna Wiewiorowska, Polish Scientific Publishers [PWN] Warsaw-Lodz, 1981, 126 pages]

[Text] The prospect of implementing direct satellite television, envisioned by the year 1985, has evoked the need to consider the political and legal problems connected with the preservation of the rights of sovereign states under conditions of direct transmission of information from certain states to others without the possibility of controlling the content of this information. The UN has begun negotiations aimed at establishing special legal principles regulating the use of artificial earth satellites for direct tansmission. The author of this work shows the extent to which the broadcast of direct satellite television programs is regulated, and indicates the new problems demanding special legal regulation which are created by such broadcasts, pointing out the directions of the required regulation. The concludes that the proposal to adopt the principle that broadcasts into the territory of third states can be implemented exclusively on the basis of previous agreement is the only one which is not supported by standing international law or law of outer space. The other questions can be regarded as regulated or partially regulated in standing international law. However, this statement should not diminish the significance of the negotiations aimed at working out the principles of direct satellite television, for it is necessary to affirm other principles.

CSO: 5500/3010

BRIEFS

SATELLITE NEWS PLAN--The Royal Gazette newspaper has applied to the Development Applications Board for planning permission to erect a satellite dish on the roof of its Par-la-Ville Road offices to improve the quality of its international news services. General Manager of the newspaper Mr. Keith Jensen confirmed yesterday that the application had been made. He noted, however, that no firm decision had been taken on whether or not to proceed with the setting up of a dish if permission were granted. "The application was made as part of a feasibility study investigating means of improving the quality of our international news gathering capabilities," said Mr. Jensen last night. He declined to elaborate until the Development applications Board had considered the application. The Royal Gazette at present receives foreign news copy through the Reuters and United Press International services from New York. The newspaper also receives world photographs via the United Press International wire photo service--pictures are printed by a machine which picks up radio wave transmissions from New York. [Hamilton THE ROYAL GAZETTE in English 21 Apr 82 p 2]

CSO: 5500/7535

'ANN'S' PLANS FOR INTERNATIONAL EXPANSION EXPLAINED

PA241434 Managua BARRICADA in Spanish 18 May 82 p 5

[Article by Edgard Barberena S.]

[Text] With the upcoming opening of offices in Panama and New York, the New Nicaraguan News Agency (ANN), the official spokesman of the Sandinist revolution abroad, will take an important step forward in its daily efforts to neutralize the transnational news agencies' campaign against Nicaragua.

Next week, the New Nicaraguan News Agency--founded 32 months ago--will open its offices in the Panamanian capital, in an effort to expand the voice of the revolution internationally. Carlos Humberto Castillo and Francisco Hernandez Segura are the director general and assistant director of the information agency.

Approached by BARRICADA, ANN Information Director William Gribsby Vado told us that ANN will also open new offices in the UN building in New York, which will permit the revolutionary process to project itself more effectively.

"Our purpose," Gribsby said, "is to open offices in the primary Latin American and European countries and to establish channels of cooperation with various news agencies that permit us to reach other nations of the world."

ANN's General Directorate also intends to open offices in Canada, Venezuela and the FRG before the end of 1982 and in Moscow by 1983. The latter office will serve as the headquarters for the socialist bloc of nations, which will allow better communication between those countries and the Sandinist revolution.

Gribsby said that it is important to note that the agency already has a translation department for the French and English languages, which conveys information from Nicaragua to the noted French newspapers LE MONDE, L'HUMANITE, LA MATIN and to French magazines, as well as to Canada.

English transmissions are sent to Europe, where they are channeled daily by the different committees of solidarity with Nicaragua to 100 Western information services. Transmissions are also sent to the Scandinavian peninsula, where the progress of the Sandinist revolution is revealed through many information organizations from Iceland, Norway, Sweden and Denmark, including the official Swedish radio.

In addition, ANN is published in Costa Rica, Mexico and Honduras, through the effort of its correspondents, who report daily to ANN's central editing office in Managua. The greatest percentage of ANN publications are used by the Mexican newspapers UNO MAS UNO, EL DIA, EXCELSIOR and UNIVERSAL, and in the Mexican cultural radio, television, Channel 11 and various Mexican magazines. These publications use 20 0/0 of ANN material, as compared to other news agencies.

Another means that ANN uses to project the revolution internationally is the nonaligned pool of agencies. The information transmitted is received daily by over 90 member-nations. In addition, ANN is currently a member of the National Information Systems Activity (ASIN), which groups official agencies from Mexico, Venezuela, the Dominican Republic, Cuba, Guyana, Costa Rica, Panama, Peru, Ecuador, Grenada and Jamaica, using the Inter-Press Service (IPS) transmission channel.

ANN was founded on 19 October 1979. It was first located on the seventh floor of TELCOR's Zacarias Guerra building. At present it is located at the former French Alliance installations and has a staff of 75 people who work daily to disseminate information on Nicaragua.

ANN has signed agreements with other international news agencies, such as PRENSA LATINA (PL), TASS, Bulgarska Telegrafna Agentsiya (BTA) of Bulgaria, Magyar Tavirati Iroda (MTI) of Hungary, Czechoslavenska Tiskova Kancelar (CTK) of Czechoslovakia, Polska Agencja Prasowa (PAP) of Poland and the Allegemeiner Deutscher Nachrichtendienst (ADN) of the GDR.

In addition, ANN's news exchange has extended to the Thong Tan Xa Vietnam (VNA) of Vietnam, the Choson Chungang Tongsin (KCNA) of the Democratic Republic of Korea, and the Inter Press Service (IPS) of Italy.

This service includes the cooperation of international organizations, such as the Canadian Overseas University Service (Servicio Universitario Canadiense de Ultramar--CSUCO), which donated $70,000 to ANN; and the governments of Libya and Cuba, which also helped in the development of the New Nicaraguan News Agency.

Several ANN journalists have received technical training courses in Italy, Cuba and Nicaragua, and there are three ANN technicians currently in Moscow, taking courses on electronic and telegraphic communications, in order to maintain the revolution's complex communications structure.

Gribsby pointed out that there are plans to expand ANN's photography department. For this purpose, negotiations with international organizations are already underway, in an effort to obtain the financing required to allow the agency to send photographic images of what is happening in the country to various countries.

"We know that our work is difficult, but we believe that we will forge ahead through daily effort and with the encouragement offered us by the consolidation of the revolutionary process. Thus we will overcome the obstacles and difficulties ahead," William Gribsby concluded.

CSO: 5500/2237

BRIEFS

NEW TELEVISION RELAY--According to a Central News Unit report, thanks to collaboration between the staff of the technical repair and maintenance unit of the Voice and Vision of the Islamic Republic of Iran in Mashhad Center and the group engaged in extending the television network of the Voice and Vision of the Islamic Republic of Iran, the 'Aliak television relay system was set up on 9 April this year and officially started work as of 29 April. The relay system transmits the first programs of the Vision of the Islamic Republic of Iran on channel No 7 with a power of 10 watts and brought the 'Aliak, Moshkan, Soltanabad, Robat-e Jaz, (Boroaban), Chahak and (Anbarestan) regions between Heyshabur and Sabsevar under the coverage of the Vision of the Islamic Republic of Iran. [Text] [LD300506 Tehran Domestic Service in Persian 1630 GMT 29 Apr 82]

RADIO-TV CHIEF RETURNS--According to IRNA, MP, Mohammad Hashemi, supervisor of the Voice of Vision of the Islamic Republic of Iran, returned to Tehran this morning from a visit to Yugoslavia, West Germany, Libya and Algeria during which he studied mutual cooperation with various radio and television stations. Mr Hashemi had fruitful discussions with high-ranking Algerian officials, including the ministers of education and information and the head of the Central Committee [as heard] of the Algerian National Liberation Front. In an interview with the IRNA correspondent in Algeria, the supervisor of the Voice and Vision spoke of the purpose of this trip, saying: Our main aim is to evaluate the technical equipment which may be of use to us in various countries, as well as to purchase some of the items needed by the Voice and Vision of the Islamic Republic of Iran. He added: Our other aims are to exchange television and cinema productions with friendly Muslim countries, as well as with countries of the Nonaligned Movement, to coordinate our views on international radio and television conferences and to coordinate purchases with these countries. The supervisor of the Voice and Vision of the Islamic Republic of Iran said: Another important matter discussed was making use of Algerian radio transmitters to strengthen the Voice of the Islamic Republic of Iran, so that in this way we can send the message of the Islamic revolution in Arabic to those countries that do not receive the Voice of Iran. [Excerpts] [LD281802 Tehran Domestic Service in Persian 1030 GMT 28 Apr 82]

DIRECT TELECOMMUNICATIONS LINKS--JOMHURI-YE ESLAMI's correspondent has reported from the Iran Telecommunications Company that recently direct communication links without the assistance of an operator have been established with the following countries, using the following codes: Singapore 006, Norway 0047, Finland 00358, Denmark 0045, Sweden 0046, Syria 00963, Luxemburg 00352 and Ireland 00353. [GF171700 Tehran JOMHURI-YE ESLAMI in Persian 3 May 82 p 5]

CSO: 5500/2229

BRIEFS

TELECOMMUNICATIONS AGREEMENTS SIGNED--Two agreements on telecommunications were signed today in the office of the Post, Telegraph and Telephone minister. The first agreement was signed with (Funun and Tgbahyan) Company to provide the telecommunication corporation with services and equipment in order to expand means of communication. The U.S. (Harris) Company will provide the project with technical equipment worth 432,285 Omani riyals. According to the second agreement, which is signed with the Mustafa and Jawad Company, the corporation will be provided with 650 English telex machines in addition to 350 Arabic-English telex machines. The (OKI) Japanese Company will manufacture these machines, which are worth 785,550 Omani riyals. [Text] [GF131430 Muscat Domestic Service in Arabic 1300 GMT 13 May 82]

CSO: 5500/2230

SAUDI ARABIA

BRIEFS

SOLAR POWER FIBEROPTICS--Saudi Arabia has ordered optical fibre equipment which will be powered by solar energy. During the next 18 months or so, Plessey, for which this is the first overseas success in that product range, will install and commission the terminal and line equipment. This will provide six 34 megabits-per-second optical fibre systems, each capable of carrying 480 telephone channels simultaneously. The equipment is being supplied to BICC Metals, on behalf of the central region of the Saudi Consolidated Electric Company, based in Riyadh. BICC Metals will supply its "fibral" overhead conductor, which has been designed to replace the earth wire on the 92 kilometres of power line. [Text] [GF011228 Manama GULF MIRROR in English 1 May 82 p 10]

CSO: 5500/2230

UNITED ARAB EMIRATES

BRIEFS

NEW TV CHANNEL--Mr Abdullah al Nuweis, under-secretary of the Ministry of Information and Culture, has announced that trial transmission from the second channel of Abu Dhabi TV will start on Saturday on UHF-48. It will be a daily 3-hour transmission, beginning at 8:00 pm. The trial period is scheduled to last a couple of months, but, from 1 June, the transmission will be extended to cover al-Ain on UHF-35. The eastern region and the islands will also be gradually covered when the necessary booster facilities are completed, he said. It is understood that the second channel 5, though, mainly meant for expatriates as is the trend in the other Gulf states, will not, however, be completely foreign-oriented. The programmes will include Arabic feature films, documentaries, plays and folklore. The announcements will also be in Arabic, with sub-titles in English, and vice versa. [Excerpt] [GF131146 Dubayy KHALEEJ TIMES in English 13 May 82 p 3]

CSO: 5500/2230

BRIEFS

RADIO EXPANSION PLANS--Radio reception in Taita Taveta District will be improved when the 26 million shillings VOK mediumwave transmitter station at Voi is operational. An assistant minister for information and broadcasting, Mr Khasakhala, stated this when he toured the station. Mr Khasakhala said that the government was improving radio and television reception throughout the country. [Excerpt] [EA210044 Nairobi Domestic Service in English 1400 GMT 20 May 82]

CSO: 5500/2237

DETAILS ON SMD DESIGNED RADIOS GIVEN

Johannesburg ARMED FORCES in English Feb 82 pp 13-15

[Text]

This article traces the history of one of the key manufacturers of strategical communications equipment in the Republic. The article reveals that South Africa was a world leader in the design and production of the vital frequency hopping technique. The standard of the equipment has been publicly demonstrated by the communications system used by the Uruguay Yacht Race guard ship Howard Davies. The daily reports broadcast by the South African Broadcasting Corporation were transmitted on a TR15B transceiver.

Ask this question of almost any civilian in Pretoria, which is where Grinaker Electronics and its predecessors have been located for about twenty years, and the most likely answer you will get is "Never heard of them" yet the company's products are well known in Defence communications and the company's history in this field can be traced back to World War II.

The original ancestor of the present company was SMD Manufacturing Company (Pty) Ltd of Pinetown, Natal. This company produced a lowpower amplitude modulated mobile transceiver during World War II, which saw service with the South African forces in North Africa and Italy. One of these sets, affectionately known as the "Golden Glory", was still being used as the control station in the road network run by radio amateurs at the Kyalami racetrack well into the 1970's. After the war, SMD reverted to the manufacture of domestic radio's, but, in the late 1950's was chosen by the National Institute of Telecommunications Research to produce ten prototypes of the revolutionary communications receiver invented by the late Doctor Trevor Wadley. These prototypes worked well enough to prove the Wadley principle, but were not suitable for quantity production. Demonstrations to the leading receiver manufacturers in England produced a unanimous negative response – the Wadley receiver was too complex for production, but the Royal Air Force were sufficiently impressed by the prototype to award a small development contract to a little known company, Racal Engineering Ltd, to engineer a production item. That they were successful is now history; the Racal RA17 was born and Racal itself was set to develop into one of the largest group of electronic companies in the world.

The late 1950's saw the advent of the transistor and also the shift to single side band systems in the high frequency communications field. SMD Engineers kept up with the state of the art and produced the world's first Mobile H.F.SSB transceiver which was fully trasistorized except for the final transmitted stages, the RT422B. Many hundreds of these sets were made and sold over Africa. RT422B's are still in service in many countries from the Sudan to South Africa. The set was adopted by the South African Defence Force as the C14 and was fitted to defence vehicles of the period, which have, of course been phased out of service.

A unique feature of the RT422B was the use of speech processing which increased its "talk power" by a factor of at least 4. It was the first commercially available transceiver to use this system, which has been used in all subsequent transceivers developed in Pretoria.

SMD represented Racal in Southern Africa and as sales of Racal products increased, especially with the sale of the UK designed TA127 1kW ISB transmitter and AFV communications to the SADF, it was decided that local manufacture should be undertaken. A new company, Racal SMD (Pty) Ltd was established in 1963 Racal UK being the major shareholder. In order to be near its major customers, premises were acquired in Struben Street, Pretoria, which became the new company headquarters.

The next design breakthrough came about this time with the development of the RT14 solid state manpack SSB transceiver. Up to this time, changing the frequency of a transceiver channel was a complicated business, involving the fitting of different coils and re-tuning many of the receiver and transmitter circuits. The RT14 introduced the wideband techniques which are now standard practice in SSB transceivers worldwide. The power output of the RT14 was only 5 watts p.e.p. and this proved to be insufficient to provide reliable long distance communications in Southern Africa, especially during the summer, when high levels of static interference exist, so the RT14 did not go into production here. However, it performed quite adequately in more temperate climates and Racal UK developed it further into the "Squadcal" series of transceivers, which enjoyed such large sales worldwide that a separate company, Racal Mobical Ltd, was set up in England for its manufacture. Another version of this transceiver was manufactured by Racal in their US plant and supplied to the American forces for use in Vietnam.

Meanwhile, in Pretoria, a higher powered version of the RT14, with 25 watts p.e.p. output, was developed. This became the TR28 (SADF number B16) of which several thousand were made. Besides South Africa the TR28 saw service in Rhodesia, Angola, Mozambique and Guinea-Bissau. To supply the Portuguese requirement, production lines were set up in Lisbon and then Lorenco Marques. Further development yielded the TR15, a 100 watt mobile SSB transceiver. This initial model the TR15L was a channelised equipment, requiring a frequency determining crystal for each channel and it had a short production life as the advent of the frequency synthesizer in the later versions rendered channelised equipment obsolete.

Frequency synthesizers small enough to be used with mobile and portable transceivers became possible with the availability of TTL integrated circuits and operators could set a transceiver to any frequency in its operating range, with an accuracy of a few cycles, in a matter of seconds. To use this rapid timing facility to best advantage, automatic antenna tuning units were developed. The first models used sensors to determine the amount of mismatch between the transceiver and the antenna and generate signals to drive small electronic motors which adjusted variable inductors and capacitors until an obtimum match was achieved These units could tune a system in 15 to 30 seconds and the principle is still in current use, especially with high power transmitters. Later, the relatively slow motor operated system was replaced by logic circuitry operating reed relays and tuning times of less than one second are now standard. These ATU's are much smaller than the motor driven versions and can be incorporated into the transceiver case as in the current versions of the TR15.

By the early 1970's, Racal Electronics South Africa Ltd, the manufacturing subsidiary of Racal-SMD, was producing a complete HF SSB system for the SADF which included 1 kW base stations (many of which were fitted to mobile shelters), 100 W mobile transceivers and 20 watt manpacks. All of these incorporated frequency synthesizers and were fully solid state.

In 1978 a deal involving the purchase by Grinaker Holdings of Racal's entire shareholding and the establishment of the 100% South African company Grinaker Electronics (Pty) Ltd (Grinel) was effected.

Modern radio detector equipment can determine the geographical location of conventional fixed frequency transmitters in a matter of seconds, making them easy targets for enemy air attacks and jamming. Both these problems can be overcome by the use of frequency hopping techniques. By 1979, Grinel had developed and had in full production a system using these techniques.

In the frequency hopping system developed by Grinel, the transmitter frequency is determined by a frequency synthesizer which can generate any frequency within a wide band of frequencies and which can be switched rapidly (in milliseconds) from one frequency to another. The synthesizer is controlled by a microcomputer which switches the frequency in a pseudo-random sequence, changing the frequency every few milliseconds.

As many as a million different codes can be selected by the operator. Only a receiver fitted with a synthesizer and microcomputer set to the same sequence can detect the transmission, which is inaudible on conventional receivers.

It was not until late 1981 that a British company offered production quantities of frequency hopping equipment – which they claimed as a world first in their advertisements – two years behind Grinel.

Although Racal Electronics South Africa Ltd, was nominally an autonomous member of the international Racal group, planning decisions made in South Africa were always subject to possible veto by group headquarters in England, who naturally put group interests before those of individual companies. R & D programmes were rationalised to prevent duplication of effort and the South African company frequently had to put equipments into production which were designed overseas, not specifically for Southern African conditions. With the Racal control removed, Grinel engineers have designed a range of equipments which are ideally suited to local requirements, both environmentally and technically. Grinel now boasts the largest private R & D facility dedicated to military communications in the Southern hemisphere.

A more recent world first was the UHF/SSB medium range frequency hopping equipment which is presently in production.

The factory at Wattloo is equipped with modern machinery – numerically controlled metal working machines, tape controlled component insertion stations and flow solder machines etc. Environmental test equipment is available to test equipment to the most stringest Defence Specifications for shock, vibration temperature and humidity. Strict Quality Assurance programmes are laid down and all equipments are soak tested before despatch from the factory. Production management planning is such that large or small orders can be put on line in minimal time and Grinel prides itself on the short delivery times it can quote to its customers and its ability to adhere to them.

Since its beginning in Natal twenty years ago, the company has developed into an organisation with over a thousand employees which can provide South Africa with much of its requirements of modern radio communications equipment better than that available anywhere in the world, a fact which is borne out by steadily rising export sales.

The TR400 frequency hopping VHF manpack with tactical E.W. evasive communication range up to 300 km.

The TR 48S Manpack is a high performance, low-cost military or civilian HF communications transmitter receiver.

The TR 62H 100 watt frequency hopping HF/SSB transceiver. The TR 62H is both detection and jamming resistant and with 1 million selectable codes supplies secure communications.

CSO: 5500/5810

ZIMBABWE

USE OF SATELLITE PHOTOS TO IMPROVE FARMING CONSIDERED

Harare THE HERALD in English 6 May 82 p 6

[Text] The use of satellite photographs can improve Zimbabwe's agriculture and overcome the problem of water shortages in some parts of the country, says a senior geologist.

In an interview in Harare yesterday, a geologist and national coordinator on remote sensing in the Department of Geological Survey, Mr Ambrose Made, said satellite photographs provided information about the earth's surface and clearly showed how it looks.

"From a satellite picture you can determine what type of soil dominates a particular area and so the farmer can find out which crop will do well on that type of soil."

He said one could also work out the yield expected from a particular area from a satellite picture and this was already being done in other countries, for example the United States.

Mr Made said other advantages of using satellite pictures were that:

Details

--The country would know its surface in detail by identifying geological features like faults, fractures and joints in the rock bed;

--Since it has been geologically proved that dams and boreholes do well on joints and faults, the Government could build water sources on such features;

--They could be used for mineral exploration;

--They could be used to predict natural disasters such as volcanoes and earthquakes; and

--They could be used to update and upgrade maps.

"The science of satellite pictures can be used for multi-disciplinary purposes," he said.

Following independence, Zimbabwe now had access to the world and consequently to the various technologies that had been developed.

Mr Made said that because of the large amount of information that could easily be got from satellite pictures, remote sensing had to be part and parcel of every Government development programme.

Remote sensing is the science and art of obtaining information about an object or area through the analysis of data acquired by a device that is not in contact with the object.

The devices normally used were aircraft and satellites.

He said it was important for Zimbabwe to join the African Remote Sensing Council because there were many advantages.

"The major advantage is that if Zimbabwe joins the council, it can be seriously considered as a sub-regional trainer and user centre and would have people from the sub-region coming to train here."

The main objective of the council was to promote the development of remote sensing activities and improving the exploitation and development of natural resources that were of economic interest to member states.

Mr Made said that by becoming a member, Zimbabwe would have access to the well equipped workshop in Nairobi for repairing and servicing optical and electronic equipment at a cost normally one-third of that charged by a private company.

CSO: 5500/5802

DEPUTY MINISTER OF COMMUNICATIONS ON RADIO DAY

LD101040 Moscow Domestic Service in Russian 0807 GMT 7 May 82

[Interview with Gennadiy Georgiyevich Kudryavtsev, deputy minister of communications of the USSR by correspondent Lev Barshchevskiy, on Radio Day in USSR--live]

[Excerpt] [Kudryavtsev] At the present time, radio broadcasts and programs cover the entire territory of our country and are available to all our population. The country's television transmission network is the most widespread, and one of the biggest, in the world. Good reception of the first program is available on over 87 percent of the territory on which the country's population lives. In October 1980, five-zone transmission was introduced for the first program of television so that people living in the different time zones of the country can see Moscow television programs at times convenient for them. The educative role of television is increasing in connection with the introduction of the second all-union program. It can be seen by over 100 million people.

It is known that nowadays space equipment is widely used for the needs of radio and television. Artificial earth satellites have come to be widely used for the needs of radio and television. Artificial earth satellites have come to be widely used for transmitting of television, radio, telephony and facsimile transmission of newspapers. At the present time, a multipurpose communications network has been established on the basis of geostationary satellites of the Raduga, Gorizont and Ekran types. Interesting possibilities for full coverage of the country by television transmissions have appeared with the creation of the Moskva satellite distribution system. In the long term, it is intended to create and bring into use new satellite systems in the 12 Gigahertz band, which will make possible the expansion of multi-channel central and republican television broadcasting.

Communications has today become one of the responsible branches of the national economy, providing the technical capability for the transmission of information of various kinds necessary for managing the country and its economy. It has become an integral part of many production processes and provides opportunities for business and personal contacts between people.

[Barshchevskiy] Gennadiy Georgiyevich, it is known that technology in the field of radio, television and communications is developing very rapidly. We should like to hear what novelties in this field await us in the coming years. What are the prospects for the development of radio and television technology in the 11th FYP?

[Kudryatsev] The contemporary scientific-technical revolution has touched on all forms of electrical communications from the oldest to the newest. More and more apparatus units of cable, radio-relay and satellite communications lines are being built on the basis of micro-electronics. There are radical changes in information technology. The traditional relay electromechanical systems of commutation are being replaced by program-controlled electronic systems. The assimilation of new frequency bands in satellite communications system with directional aerials, and the processing of signals on board the satellites, fiber-optic cable systems, the widespread introduction of electronic computers, and a number of other scientific-technical problems, have to be solved in the 11th FYP, in the interests of setting up a unified automated communications system for the country.

CSO: 5500/2228

NEWSPAPER FACSIMILE TRANSMISSION DESCRIBED

PM141425 Moscow SELSKAYA ZHIZN' in Russian 7 May 82 p 3

[Reportage by A. Gusev, scientific editor of the Journal Radio, under the rubric "Today Is Radio Day, the Holiday of the Workers in All Communications Sectors": "Newspaper Transmitted Through Space"]

[Text] Radio communications, radio broadcasting, television--these words have become part of our lives. Radio has become a customary prefix to the names of a number of sciences. Radar [radiolokatsiya], radioastronomy, radiophysics, radiometry and many more radio sciences have won the rights of "full representatives" of radioelectronics. All the same, every time you come across the ubiquitous radioelectronics, you cannot help wondering at its rapid development. It has, so to speak, firmly seized a bridgehead and is extending it--it is mounting a successful attack on all sectors of science and technology.

Take publishing, for instance. Until quite recently people living in remote cities in the country received the central newspapers the following day at best. Now they can read them at the same time as Muscovites. Radioelectronics takes the credit for this. A system of transmitting newspaper pages by phototelegraphy has been created and is operating successfully. The matrices from which the newspapers are printed are being shipped by electromagnetic waves instead of aircraft.

A print of the newspaper page is placed in the phototelegraphic apparatus. And its special analyzing device analyzes what it sees and converts it into electric signals, gradually, one narrow strip after another, like a combine in the fields at harvest time. If there is a light section in the strip, one signal is given, and if it is dark, another. These signals pass along land and space communications lines, undergoing various transformations en route, to the local printing houses, where there is another phototelegraphic apparatus, the receiver.

Here everything goes strictly according to schedule and without interruptions--the printers and communications workers work harmoniously. And that is understandable: For the time taken to transmit a newspaper, short though it is (one page takes about 2 minutes), it is necessary to interrupt communication on 60 telephone channels.

The reverse task is resolved at the point of reception: The signals received are translated into visible form. By exposing the film to electric light in sections in the phototelegraphic apparatus it is possible to reconstruct the transmitted pages. They then develop the film, make prints from it, prepare the matrices and start printing the newspaper without delay. In the morning it reaches the reader.

Thus newspapers cross hundreds and thousands of kilometers in a matter of minutes, thanks to radioelectronics. Sixteen central newspapers, including SELSKAYA ZHIZN, are sent in this way to Khabarovsk, Irkutsk, Tbilisi and other centers--in all, to more than 40 major cities in the country. In the current 5-year plan the delivery of newspapers through space will be extended. This will be made possible by the new Moskva satellite communications system with its compact ground equipment.

Satellite communications systems are a young, rapidly developing sector. Thanks to this sector 15 years ago the inhabitants of a number of cities in Siberia and the Far East were for the first time able to see live television coverage of the Red Square parade by way of a space linkup through the Orbita system.

Now three space communications systems are operating in our country--Orbita has been joined by Ekran and Moskva. It is through them that the main task in the sphere of television development is being implemented in the 11th 5-year plan--the transmission of the first and second all-union programs to five broadcasting time zones at convenient times for television viewers. They have already made it possible to extend the television coverage zone and reach 86.5 percent of our country's population.

Together with professional communications workers, the holiday is being marked by the many thousands of radio enthusiasts, or, as they are still called, the experts of the "people's laboratory." The range of their creativity is very great--from the simplest radioelectronic toys and receivers to space relay stations.

Yes, it has by the hands of radio amateurs in the USSR Dosaaf Space Technology Laboratory that the Radio-3 to Radio-8 satellites, put in orbit late last year, were created. Hundreds of radio amateurs--shortwave and ultrashortwave--communicate successfully through them.

The amateur radio designers also make a great contribution to our national economy. They respond with concrete deeds--the creation of new instruments, devices and adaptations--to the party and government appeal for new ways of improving production efficiency and quality and ways of reducing the expenditure of electricity, materials and labor.

CSO: 5500/2231

BRIEFS

TV RELAY STATION--In Ordzhonikidze central TV programs and local studio transmissions can now be received by builders of a highway across the main Caucasus range thanks to a powerful relay station which has been commissioned today. There are now 24 powerful relay TV stations in North Ossetiya. [LD080008 Moscow Domestic Service in Russian 1400 GMT 7 May 82]

MOSKVA STATION--Reportage on the May Day demonstration was seen for the first time today in the village of Koyda in Arkhangelskaya Oblast. On the eve of 1 May a Moskva system receiving station came into operation. This station receives a signal from an earth satellite, amplifies it and transmits it via a retransmitter. In the coming years more Moskva system installations will be commissioned in many remote villages and settlements in Arkhangelskaya Oblast. [Text] [LD020048 Moscow Domestic Service in Russian 1230 GMT 1 May 82]

'COSMOS-1366' LAUNCHED 18 MAY--Moscow, 18 May (TASS)--The Soviet Union today launched another artificial earth satellite in the Cosmos series "Cosmos-1366." The satellite carries scientific instruments for the further exploration of outer space, and experimental equipment operating in the super-high frequency band and intended for retransmitting telegraph and telephone information. The satellite has been launched into a circular orbit with the following parameters: Distance from the earth's surface--35,820 kilometers, the inclination to the plane of Equator--1.5 degrees, the period of revolution--23 hours 57 minutes. Apart from scientific and retransmission equipment the satellite carries a radio system telemetric system for transmitting back to the earth the data concerning the operation of instruments and scientific equipment aboard. The equipment aboard the satellite is functioning normally. The coordination computer center is processing the data transmitted by the satellite. [Text] [LD181736 Moscow TASS in English 1730 GMT 18 May 82]

CSO: 5500/2228

PROGRESS TOWARD JOINT NORDIC TV SATELLITE EXAMINED

Helsinki SUOMEN KUVALEHTI in Finnish 2 Apr 28 p 26

[Article by Arja Laitinen: "Nordsat's Slow Progress"]

[Text] Already more than 10 years have been sacrificed on the joint Nordic tv-satellite project. Several million markkas have been expended for reports on Nordsat even though the official research phase is only now beginning.

Time is by-passing Nordsat at a rapid rate since Western European tv-satellites are flooding the markets with programs and thus the accomplishment of this expensive Nordic venture may seem to be a complete waste with or without the principle of rotating program responsibility.

It may also happen that the planning of Nordsat will continue to remain in principle only: the Nordic Council continues to be replete with concerned speeches about an alarming flood of stupefying entertainment coming into the culturally unique households of the Nordic countries.

An important meeting in the history of Nordsat was to be held in the beginning of March in Helsinki when the Nordic Council was to have made an official decision on the commencement of a 2-year research and planning phase for Nordsat. The Nordic Ministerial Council made this recommendation to the Nordic Council when it convened in Copenhagen last November.

However, in February Denmark's new government announced that it will not participate in this joint Nordic satellite project. Denmark justified its decision on the basis of the expense of the project. And it is indeed true that so far no one has at least publicly dared to estimate the cost of Nordsat. It is only said that "a billion markkas will not be sufficient".

After this, it became urgent to present a membership proposal to the Nordic Council for the continuation of the Nordsat project among the four remaining Nordic countries; Iceland, Norway, Sweden, and Finland. Denmark's share of the funding, approximately 23 percent of the expenditures, will now be divided between the four remaining Nordic countries.

The Nordic Council's Education Committee approved the membership proposal, which will be signed by all the parties representing Finland. The committee's Danish members will refrain from voting.

After a vote at a full session the Nordic Council decided to recommend the continuation of the Nordsat project between the four remaining Nordic countries. Thus the annoying episode caused by Denmark was left off the agenda.

At the end of March the Finnish Government gave its guarantee for the con[illegible]uation of the Nordsat project. And in the final week of March the Nordic Ministerial Council adopted a new decision in Stockholm to begin a 2-year research and planning phase.

The intent during this 2-year period is to determine the actual expenditures of a joint Nordic satellite, the format for programming to be transmitted by satellite -- the Swedes have proposed a so-called principle of rotating program responsibility, which no one knows what this means in practice -- as well as the necessary agreements for accomplishing this project.

The games that are being played around Nordsat would even be amusing if it were not for that fact that they are so impossibly serious. The accomplishment of Nordsat even today, in the year 1982, does not appear to be very credible in that there are so many opponents to the project.

"Nordsat Nearly Senseless"

Managing Director Erkki Backman of the Teleste Corporation and Professor Martti Kiuri of Helsinki Technical College were able to make public through Minister Jacob Soderman during his appointment to the Nordic Council a letter in which they consider the Nordsat plan to be nearly senseless at this time. Backman and Kiuri base their arguments on the high cost of a joint satellite.

In the opinion of Backman and Kiuri it would make considerably more sense to use already existing or planned small-capacity satellites for experiments. Small-capacity satellites are considerably cheaper than the large-capacity satellites (such as Nordsat). Small-capacity satellites could be used for experimental use on one or two tv-channels. Each country would thus procure its own transmitting equipment and would transmit programs on alternating days. For example, Sweden's Tele-x is representative of this kind of small-capacity multiple use satellite.

The Nordsat project has also encountered political opposition. In Finland a portion of the People's Democrats, former Communications Minister Veikko Saarto, among others, oppose the Nordsat project because of its cost and also for programming policy reasons.

In Sweden the Social Democrats have opposed Nordsat for a long time, their favorite being the Swedish Tele-x-satellite, which has even received support in Finland. It will be launched into space after 4 years.

If the Social Democrats win Sweden's parliamentary elections next fall, it will certainly mean the final deathblow for Nordsat. One can hardly expect that Iceland, Denmark [sic], and Finland will then continue to support the Nordsat project.

Sweden's Tele-x-system is naturally of interest from the point of view of Swedish development in this area, and even though a rather positive attitude is expressed toward this satellite project in Finland, there are some here who consider participation in this project to be somewhat questionable since decisionmaking power with respect to the use Tele-x would remain with the Swedes.

It is clear that the Nordic broadcasting corporations have adopted a rather indifferent attitude toward the Nordsat project since the actual expenditures of this large-capacity satellite are still obscure as has been stated many times.

Instead, the Finnish Broadcasting Corporation as well as Norway's radio have had a positive response to the development of Sweden's Tele-x-satellite. On the other hand, Denmark's radio is not interested in this satillite either.

The Finnish Broadcasting Corporation is interested in the Tele-x-satellite for the reason that in last year's budget the parliament approved an appropriation for the preliminary planning of the so-called coastal channel. The planning group was given the task of determining program distribution opportunities that might be opened up by Tele-x for the Swedish-speaking population of Finland as well as Finns living in Sweden. In the opinion of the work group permanent programming cannot be achieved by means of Tele-x, but data and experience for the future could be obtained. For this reason the Finnish Broadcasting Corporation also intends to participate in the planning of programs for a Tele-x channel.

At the same time that games are being played around various satellite alternatives in the Nordic countries and issues concerning decisions in principle are being deliberated, elsewhere development has progressed much further.

There should be six Western European satellites in space by the year 1986. In 2 years there are plans to launch into space the joint European L-SAT satellite, a multiple use satellite, SAT-TV satellite, a tv-satellite from the Federal Republic of Germany, the French tv-satellite TDF-1, LUX-TV, which is a tv-satellite from Luxembourg, TEL-SAT, a private Swiss-English tv-satellite as well as Sweden's Tele-x. Nordsat's schedule extends to the end of this decade.

All the satellites will initially have from two to five tv channels, which will later be increased.

Helsinki Television is already transmitting programs from the English Satellite Television satellite.

There are no legislative obstacles to the transmission of satellite programs in Finland since the radio law in effect is from the 1920's when it is doubtful that people even dreamed of satellites. A radio and television committee is presently deliberating new legislation, and it is expected that the committee will complete its work in a couple years.

10576
CSO: 5500/2198

GOVERNMENT BROADCASTING AGENCY REGRETS CABLE TV START

Helsinki SUOMEN KUVALEHTI in Finnish 2 Apr 82 pp 34-37

[Article by Martti O. Hosia: "Helsinki Television's David Challenges Finnish Broadcasting Corporation's Goliath"]

[Text] Helsinki Television, HTV, has now linked 74,000 homes with cable television in the capital city to a commercial European entertainment network.

English films, rock concerts, and soccer matches will be transmitted into the apartment buildings of Helsinki from Eira to Haaga and from Lauttasaari to Kumpula from a satellite floating thousand of kilometers above the equator.

"The first in Europe," emphasizes HTV.

Managing Director Heikki Saraste, 30, of Helsinki Television admits that he has bought a pig in a poke. "I am not completely certain of the content of the programming. However, it is of the above-mentioned nature."

This secrecy is a result of the fact that the transmitting company, the English Satellite Television, has not yet wanted to make its final programming public. For the time being, "entertainment programs" are being transmitted, at least until the middle of April.

HTV's operating facilities in the basement of a concrete building are not especially impressive: offices for 44 employees, walls covered with maps of Helsinki dotted with red and black pins. The engineering and studio facilities are crowded into the basement of a neighboring building. A disc antenna with a large diameter directed toward space shines as a harbinger of a new era.

However, cable television may be the key to opportunities of the future. This is the belief of the Sanoma Corporation, which 1 year ago acquired control of 80 percent of Helsinki Television's shares.

This is also the belief of HTV's "chief opponent", Director Matti Anderzen of the Finnish Broadcasting Corporation. "The Finnish Broadcasting Corporation must become involved in satellite transmissions, cable television, and the video markets. We must not be left behind," thunders Anderzen.

Six Channels

Helsinki homes with cable service now receive six different channels.

The Finnish Broadcasting Corporation's TV I and II are transmitted along cables. Television from Tallinn can, in principle, be seen in color and is reinforced with sound. Frequently, the color does not come through, but the fault is on the other side of the gulf according to HTV.

HTV's three channels are the Helsinki-channel, the information channel, and the entertainment channel.

The free Helsinki-channel broadcasts serial films such as a police series from England and the already nostalgic American Bonanza. The programming time amounts to a modest 6 hours a week.

However, in its own area of operation the Helsinki-channel can boast of surprisingly large viewer figures. According to a recent viewer rating conducted by Finnpanel the proportion of Helsinki-channel viewers is more than one-third, 37 percent. TV-I's proportion was 36 percent and TV-II's share was 27 percent.

According to Saraste the Helsinki-channel's share could even be better if the viewers knew what is being offered. The newspapers in the capital city have not provided any space in their columns and even the flagship of the owner company, HELSINGIN SANOMAT, has placed HTV's programming information "somewhere under Vyborg [Viipuri] television".

The fare offered by the information channel, which operates around the clock, consists of the day's programming information, muzak, and incidental announcements. The satellite transmissions now beginning will be accommodated on the information channel.

HTV's special offering and hope for the future is an entertainment channel, for which payment will be required and which will have a weekly programming of approximately 30 hours. Movies and light musical entertainment can be seen by paying a 440-markka hook-up fee and an additional annual fee of 300 markkas.

The hook-up fee, which seems expensive, is according to Saraste an error of the former management of HTV, but the fee can no longer be rescinded. In spite of this fee, the "black box" needed for access to this channel has been purchased by more than 13,000 families in Helsinki.

Programming Amounts to Tailor's Work

The entertainment channel, for which payment is required, separates Helsinki Television from all other cable companies in Western Europe. The closest corresponding cable television operations are found in the United States from where the model for "pay-TV" was obtained.

Saraste, who has directed Helsinki Television for only a year and who before this was the planning chief of the Sanoma Newspaper Group, is full of ideas about developing "pay-TV".

Saraste talks long and earnestly about how important it is to make a difference between the management of a distribution network and programming operations. At this time HTV manages both, which has confused the views of politicians as well as the man on the street with respect to cable television.

"We would hope that we are seen as a distribution network as, for example, the joint distribution of newspapers," emphasizes Saraste.

As far as the future plans of HTV are concerned programming operations can be taken care of by all those who are interested in it and ready to pay. Presently, HTV takes care of its own programming because of existing conditions or -- as Saraste says -- "historical reaons".

Saraste cites sports and theater as examples. "One could even imagine that HIFK could videotape all sports events. These events would be timed for viewing on HTV the following day. Those who have purchased a 'season ticket' from HIFK would be able to watch these sports events. The ticket could cost 100-150 markkas, for example. The aviation club could, on the other hand, send its members a program of its annual competitions. The theaters in Helsinki could tape their shows and transmit them to those who have purchased a season ticket. The possibilities are innumerable."

At the present time the "black box" is being developed in such a way that it will only transmit programs that have been paid for and subscribed to separately. According to Saraste development work will be complete in a couple years.

This is the same goal of the Sanoma Corporation's recent offer to the capital city's party newspapers that they become part owners of HTV. At this time the minority owner of HTV is made up of a group of numerous large enterprises. "More than half of Finland's 100 largest enterprises owns shares in HTV," states Saraste in answering a question concerning ownership.

There Is Room for Growth

HTV's current 74,000 hook-ups mean that there are approximately 170,000 possible biewers. HTV hopes to find new viewers from among those 50,000 households which, for the time being, have said no thank you to HTV's offer. There are an exceptionally large number of black pins on HTV's maps in the eastside working class districts of Helsinki.

This year HTV will extend beyond the city limits of Helsinki for the first time to Espoo, Tapiola, and Olari. The connection from Helsinki to Espoo will by accomplished by HTV's own link.

In the next 10 years HTV intends to continue to install cables in Helsinki's suburbs in Espoo and Vantaa. "A possible area of operations will be within the limits of Ring Road III. In this area there are approximately 300,000 households that can be connected to cable," explains Saraste. There is room for internal growth in the cable network itself, which could presently handle 12 television channels. A transition to fibreglass cables would in time increase the number of channels to hundreds and even thousands.

"Yhtyneet Kuvalehdet [United Pictorials], SUOMEN KUVALEHTI, or even you yourself could purchase time from us for your own programming," states Saraste in describing the opportunities of the future.

HTV's plans are extensive, especially for a company which only a year ago was on the brink of bankruptcy and was saved only by the efforts of the Sanoma Corporation.

"This is still not a good business. We are only good consumers," admits Saraste, but also emphasizes that a business-like manner of thinking is now a part of the company. There is also a good feeling even with respect to job security.

Among the mistakes made by the previous management of HTV was, among other things, the belief that when the network is sufficiently expanded, advertisers will come by themselves. This did not happen. Also the preparation of its own programming along with local news was a mistake.

"Everyone says that documentaries and local news are desirable, but in practice they are not watched. On the contrary, those who have paid for the entertainment channel are extraordinarily satisfied with the programming," notes Saraste.

In the United States cable television and the satellites transmitting programs to them have created a frantic area of growth, which is being pursued by small as well as large entrepreneurs.

"In the United States the cable companies pay approximately 1,000 dollars for a hook-up. Calculated in this way our network would be worth more than 300 million markkas. In the United States we would be the 14th largest cable television company," calculates Saraste. However, as far as sales are concerned HTV is not a big company. A modest 13 million markkas is transacted annually through the company.

From the point of view of the Sanoma Corporation HTV is primarily considered to be a foot in the door, an opportunity for the future, and not a business investment for the present.

Even though cable television embryos, joint antenna systems, exist throughout the country, only Turku and Varkaus have in addition to Helsinki broadcast their own programs on a small scale. The joint antenna systems of the coastal cities along the Gulf of Bothnia have specialized in cable service for viewers of programs from Swedish television.

Among the large publishers Kirjapaino or AAUMULEHTI in Tampere have perhaps gone the furthest in the establishment of cable television.

However, the publishers have been more inclined to adopt the telset system, which transmits data to business enterprises along telephone cables. Telset is already operating in the large cities, and the telset-paper companies established by the telephone companies and local publishers have spread like wild fire thoughout the country.

If the squandering of forests for the production of newspaper print must be stopped someday, new channels of mass communication will, however, be found in cable television rather than in telset.

Satellites Will Usher in New Era

Helsinki Television does not expect the impossible from its newest venture, satellite programs. Initially, programming will amount to 1 hour a day, later 3 hours. There will be no Finnish subtitles for the programs.

However, the significance in principle is much greater. The satellite era has begun, whether we want it or not. After 3 years West Germany and France will lanuch their own satellites into space and they will be followed by the commercial Radio Luxuembourg. The Soviet Union has already launched one satellite. Also Nordsat will become a reality in form or another.

HTV's programs will come from the English Satellite Television Company, which is a purely commercial venture obtaining its capital from London City. The satellite itself is a European test satellite, from which Satellite Television has leased one channel. The remaining life span of the satellite is 1 to 2 years.

Satellite Television's transmissions will be seen initially only in Finland, Norway, and Malta, but the company's basic commercial goals are the joint antenna networks in Holland. England is not in their plans since that country's cable network is not developed. It is expected that income will be generated from advertisements for the multinational corporations.

"Tobacco and alcohol will not advertised. Norway is even stricter than Finland in this respect," promises Saraste.

The satellite experiment will not cost much for HTV. The rights were obtained through other countries and the receiving antenna is being leased from the postal service.

The opportunity for HTV to conduct transmissions from Swedish television directly into Helsinki's cable network would be perhaps more attractive than satellite transmissions. Technically this would be easy even without a satellite, but the obstacle for the time being is the problem regarding copyrights.

Cable transmissions will be inexpensive for the consumer since satellite antennas purchased separately would cost several thousand markkas. Antennas suitable for satellite reception to be transmitted to small-capacity link-up stations cost 200-300,000 markkas.

An Indifferent Finnish Broadcasting Corporation

The Finnish Broadcasting Corporation has not looked upon this rapid growth "in its own backyard" very favorably. The swords of the two companies crossed most recently when HTV obtained a permit for its connection to Tapiola and Espoo from the Postal Administration. Director Matti Anderzen of the Finnish Broadcasting Corporation issued a statement which could be interpreted to mean that this action was illegal.

"I would say that the granting of a permit was a questionable act on the part of the Postal and Telecommunications Administration. However, the intended link-up is not against the law," emphasizes Anderzen.

"What makes this matter questionable is that legislation concerning cable television is not yet complete. The postal service should not anticipate the expansion of networks.

"And if the expansion of networks is approved, then what will follow? They already exist in several localities, Tampere, Pori, Rovaniemi... If they are then joined together, a questionable situation could occur quite suddenly," states Anderzen in amazement.

HTV's Saraste's opinion of the Finnish Broadcasting Corporation is unequivocally caustic: "The Finnish Broadcasting Corporation has become accustomed to a comfortable monopoly situation. There they have become accustomed to the fact that the number of subscribers increases by 100 people a year. Now the world has changed and its monopoly is crumbling: cable televison and video have arrived. Therefore, they treat us as if we were an anathema."

However, the Finnish Broadcasting Corporation does not intend to just sit on its hands. Its board of directors has already proposed that it expand its operations into cable television and video cassettes.

The Finnish Broadcasting Corporation intends to build its cable network together with the postal service in densely populated areas. According to preliminary outlines the programming could consist of reruns and local productions so that the whole nationwide network will not be burdened with it as it is now.

The Finnish Broadcasting Corporation opened up the video markets by purchasing all the rights to 150 old films from Suomi-Film. It also intends to make video versions of its own programs. The intended video markets would include, among other things, ships, foreign construction sites, embassies, various institutions, and so on. It does not intend to enter into actual kiosk-type retail business according to Anderzen.

The long-term goal of the Finnish Broadcasting Corporation is a library service, in which video cassettes could be loaned out from libraries in the same manner as books.

Legislation Coming

Society also wants to extend a guiding hand over cable television. A partial report of the Radio and Television Committee directed by Chief of Presidential Staff Juhani Perttunen is now being completed.

According to the report cable television would have controls placed on it by "a nationwide parliamentary cable television committee" to be established by the Council of State. Also local committees would be established as needed. The task of the committees would be to make certain that cable companies observe the regulations of a cable television law.

The points of conflict in the report are, among other things, proposals to limit advertising to 7 percent of the programming time of each channel as well as the proposal to ensure that the domestic level of programming would be at least 40 percent. Even though these demands could kill cable television, they are negotiable questions on which a compromise can be reached.

A conflict of principle concerns whether cable television is similar to the operations of the Finnish Broadcasting Corporation or of the press. HTV's stand is the latter. In an ideal situation the company would only be a "printing shop" or "distribution office". The programs would be transmitted by others, who would also appoint an editor-in-chief in the manner of the newspapers.

"The concept seems to be so difficult that a picture must be drawn for people and even then they do not understand or do not want to understand," laments Saraste.

Anderzen's position is naturally different: "In my opinion an appeal to Gutenberg technology is quite weak. A new more effective technology has been developed. It should be placed under the control of society in some form since the Finnish Broadcasting Corporation is also under such control."

The owner's stand is conciliatory: "I do not see any reason for total criticism of the report, but I consider it to be an appropriate premise for advancing this matter," states Managing Director Vaino J. Nurmimaa of the Sanoma Corporation. Legislation will be created on this basis.

10576
CSO: 5500/2198

MINISTER ATTACKS AGENCY FOR ALLOWING SATELLITE-TV FROM UK

Helsinki HELSINGIN SANOMAT in Finnish 9 Apr 82 p 13

[Article: "Postal Service Transmitting Commercial TV Entertainment"]

[Text] Communications Minister Jarmo Wahlstrom (Communist) criticizes the Postal and Telecommunications Administration for the fact that it has become involved in the transmission of cable television entertainment without thoroughly investigating the issue when the postal service concluded an agreement with Helsinki Television on experimental satellite transmissions. The Ministry of Communications stipulated in a letter sent on Thursday that the postal service discontinue its reception of satellite transmissions.

The postal service and HTV concluded an agreement on a satellite experiment in January. HTV is receiving the programs of an English company, which are transmitted via a European satellite, and then it retransmits the programs to the viewers of Helsinki's cable television network.

The first satellite programs appeared on Helsinki Television's channel at the end of March. Regular satellite programming should commence at the end of April. Such English-language programming is now being broadcast 1 hour a day.

The Ministry of Communications received an opportunity to interfere in the transmission of these satellite programs when the postal service requested 160,000 markkas from the ministry for experimental Nordic satellite transmissions. The intent is to conduct these experiments on an antenna being presently used by HTV and a joint antenna in Rovaniemi. The money was requested from funding intended for the coastal channel.

The Ministry of Communications has now announced that the money requested will not be granted since the money is reserved for improving the Swedish-language services of the Finnish Broadcasting Corporation in areas along the coast.

In addition, the ministry announces in its letter that the experimental Nordic satellite transmission and the joint experiment with HTV planned by the postal service require more detailed clarification.

The Ministry of Communications also states that legislation regarding cable television is now being prepared and it would not now be appropriate "to initiate new forms of cable television with the consent of the state".

In the letter from the ministry the Postal and Telecommunications Administration is required to discontinue the reception of satellite transmissions begun with Helsinki Television and Nordic experiments should not be initiated and no applications should be made for this purpose for the time being.

"The Postal and Telecommunications Administration must inform the Ministry of Communications about the measures it intends to take as a result of this letter," stipulates the ministry at the end of the letter.

Government advisor Kai Tornblom of the Ministry of Communications states that the letter stipulates that the postal service must take such measures "which will bring an end to the reception of satellite transmissions resulting from an agreement concluded with Helsinki Television". The method in which it is to be accomplished will be determined by the postal service, but "the reception of transmissions must come to stop". according to the stand of the Ministry of Communicatons.

Finnish Broadcasting Corporation Behind Decision

Communications Minister Jarmo Wahlstrom gives one to understand that the initiative for discontinuing satellite transmissions came from the Finnish Broadcasting Corporation. Members of the radio committee involved in the preparation of a cable television law also interfered in this issue.

"Since a cable television law is presently being prepared in the ministry, it seems quite inappropriate to initiate new forms of cable television with the consent of the state," states Wahlstrom.

"No clarification has been made of the role of the Postal and Telecommunications Administration in this kind of activity, which does not entail the actual reception of signals for the Finnish Broadcasting Corporation, but is primarily an activity for commercial television entertainment. For this reason, this kind of operation is not appropriate," states Wahlstrom. He notes that the premise of the radio committee has been to maintain and even protect the level of domestic television programming "from this kind of commercial entertainment".

Wahlstrom states that he has not seen any of the satellite programs transmitted by HTV, but it is a question of principle with respect to the manner in which programming transmitted by satellites will be managed.

According to Wahlstrom the joint operations of the postal service and HTV are "clearly of a nature corresponding to the activities of the Finnish Broadcasting Corporation" and "it does not seem to have been well-considered in light of the fact that new legislation has not yet been adopted".

Postal Service Will Not Yet Take a Stand

Director Keijo E. Toivola of the radio section of the Postal and Telecommunications Administration did not want to take a stand on the ministry's letter on Thursday since it had not yet been officially received. He could not say whether Helsinki Television's satellite programs will be discontinued. If the agreement is rescinded, there could be a demand for compensation "and who will pay for this compensation", stated Toivola.

Toivola considered it remarkable that the ministry is attempting to limit technical experiments of the postal service. He suspects that the experiment on Nordic satellite transmissions will not come to a halt because of the fact that the ministry did not provide any funds.

"A Surprising Decision"

Managing Director Heikki Saraste of Helsinki Television considered the decision of the Ministry of Communications to be surprising since HTV is experimenting with operations suitable for cable television. The ministry wants to enact a cable television law without knowing the results of the experiment.

Saraste surmises that the Finnish Broadcastng Corporation fears that there will be competition for its programs and, therefore, it wants to prohibit satellite transmissions.

Saraste states that there has been a positive response from viewers to this satellite programming. According to Saraste the postal service has only been involved in the transfer of data in this experiment, which is a legitimate area of its responsibilities.

Saraste could not say what will now happen to the satellite programs. There is a 3-month period for a notice of contract cancellation in the agreement between the postal service and HTV so that nothing will happen immediately.

"If this method of transmitting programs does not suit the Ministry of Communications, then the postal service could just as well deliver the programs in package form directly from England. This would be slightly slower and more troublesome," states Saraste.

10576
CSO: 5500/2198

FRANCE

NAMES, USERS, FUNCTIONS OF DATA BANKS SUBJECT OF STUDY

Paris LE NOUVEL ECONOMISTE in French 15 Mar 82 pp 45-47

[Article by Gilles Coville: "Data Banks--Don't Forget the Guide!"]

> [Text] A new profession is being born: that of consultant on--data bank consultation--to find one's way among the 200-odd banks accessible in France.

Information is power--provided one knows where to find it and how to use it. For the past few years the data bank market has been exploding. Buried in computer memories, billions of information bits flow by telephone and terminal through telematic nets. They concern jurisprudence, regulatory matters, chemical compounds, statistical series, market studies, new technologies, etc. There are now at least a thousand data banks throughout the world, generating an estimated turnover of Fr 6 billion as of 1980, which is destined to multiply fivefold by 1985. For the moment, the American clientele accounts for nearly 80 percent of consultation expenditures. But already some 200 banks, of French (25 percent) or foreign (75 percent) origin are accessible in France. One could get lost without the services of a guide.

The proliferation of information sources is giving rise to creation of a new profession of consultant on use of data banks. Some firms even seek the services of fulltime experts.

Job offers to data bank specialists thus appear on classified advertisement pages. Oil companies are pioneers and trend setters in the field. A sign of this is the fact that in meetings of data bank experts the small group of oil company records department heads, generally women, is known as the "Princesses' Club." To its members, adept for 10 years past in the mysteries of the various nets, the major concern is to pay less for the information they buy. For enterprises just starting out, the first task is to reconnoiter the ground.

A teaching team from the Graduate Business School of Lyons has undertaken to break them in. Led by M Christian Rovhet, 33, an MBA from Sherbrooke University and visiting professor at Harvard, it has reviewed all information nets available concerning seven major business functions: general management (strategy and diversification), marketing (competitor, markets, and sectors analysis), finance (accounting standards, financing resources, customer credit), technique and production (patents, technological security), international development (market evolution, business opportunities, regulation), economics (macroeconomic, cyclical, or forecasting data), and legal (legislative texts, jurisprudence, social data). "Eight of us were not too many to identify the real needs of enterprises and at the same time make a critical census of all available information sources," notes M Rochet. That work will result in publication of a voluminous work entitled "Data Banks for Enterprise," of which LE NOUVEL ECONOMISTE has published an exclusive synthesis (see p 46).

The main conclusion of that inquiry is that automated documentation somewhat resembles lotto: it is not expensive and it can pay very well! A diversification consultant for several French firms, M Rochet found that out for himself in 1981: with a Fr 25,000 budget, "without moving from his armchair," he was able to scan a dozen banks specialized in firm strategies. Result: 600 files corresponding to as many "cases" of diversification. A mine, one might say, of experience for French firms. "When a manager is considering a given development or diversification," explains M Rochet, "it is likely that in the United States or elsewhere some firm in a comparable strategic position has undertaken the same strategic movement...a few years earlier. A time lag of 2 to 5 years is needed for the foreign experience to be cogent.

Without undertaking such broad investigations, it is possible through a good understanding of how to make use of specialized data banks to throw light on important decisions. Does a French biscuit manufacturer wish to branch out into canned goods? He can ponder the data on six American competitors who had the same idea before him, and three of whom failed for one reason or another.... Such invaluable data can be obtained within 15 days--a period devoted essentially to programming the interrogation of the banks--and for about Fr 1,200.... Does a cosmetics maker wonder about his development potential in Japan? After an hour given to perfecting a research strategy and a half hour's consultation of the Predicasts bank, Mme Marie-Claude Rondot and M Bruno Hebert, two members of M Rochet's team, came up with a detailed segmentation of the market: complexion makeup, eye shadows, lip rouge, etc., with projections to 1985. Cost of the operation: about Fr 700.

In Lyons M Olivier Froment, president of a small company making highly specialized building materials, found a representative in Canada for Fr 500, the cost of an "ad" run in Technotec, the technology transfer bank created by Control Data. An interested Canadian made the trip to Lyons, signed an agency contract, and now sells Froment materials in Canada.

"Data banks give small and medium size enterprises an even chance with large firms in detecting business opportunities," notes M Rochet. For two field trips per year the manager of a mid size enterprise spends between Fr 50,000 and 100,000 yearly. No more than that is needed to organize an information system aimed at a few key points (technical problems, competitor study, regulations, etc.)--provided one makes a good choice of banks, which means giving the needed time to analyzing what is offered on the information market.

Choice of Banks

M Michel Berthelier, another member of the Lyons Graduate Business School team, is participating in setting up a complete data bank consultation system for a French leader in the agro-food industry, with the aim of providing technological surveillance in the field of food techniques and related sciences such as dietetics and genetics. The operation entails a census of the dozens of banks capable of meeting requirements, and a preliminary selection to which interrogation tests will be applied. In that manner it will be determined that a given bank responds well in microbiology, food sanitation or toxicology, that another provides better coverage of European research projects, or that a third offers information on research by American universities in fields of interest to the questioner, etc. Finally, a list of banks will specify interrogation frequencies for each of them.

"A resolute choice of a worldwide approach to data banks must be made," concludes M Rochet. He agrees on promotion of banks of French origin which are cutting into the American quasi-monopoly and taking their share of an expanding market. But sources of information must remain very open so as to meet the needs of enterprises, which themselves are more and more international. "For a French client seeking new products," he explains, "I found, by consulting a bank in Atlanta, an idea perfected by an Argentine engineer and developed by a small Australian firm!"

Table of Major Data Banks

(1)	(2)	(3)		(4)	
FONCTIONS	**PRINCIPAUX TYPES D'INFORMATIONS**	**NOM DES PRINCIPALES BANQUES DE DONNEES**		**RESEAUX TELEMATIQUES SERVEURS**	
		FRANÇAISES	INTERNATIONALES	FRANÇAIS	INTERNATIONAUX
DIRECTION GENERALE	a) Mise au point de la stratégie	GRAPPE (Assemblée permanente des Chambres de commerce)	MANAGEMENT INFOBANK (New York Times)	G. CAM (Caisse des dépôts)	LOCKHEED, SDC DATA STAR, NEW YORK TIMES
	b) Diversification	TRANSINOVE (Bureau national d'informations scientifiques et techniques et ANVAR)	TECHNOTEC (Control Data) DVORKOVITZ TEXTLINE	CISI (filiale du CEA)	CONTROL DATA DVORKOVITZ
MARKETING	a) Concurrence	FITEC	PREDICASTS PTS	SPIDEL	LOCKHEED, DATA STAR
	b) Secteurs industriels	MERLIN "G" (Merlin-Gerin)	ABI/INFORM	SPIDEL	SDC
	c) Marchés de l'entreprise	ISIS (Chambre de commerce et d'industrie de Paris)	NEW YORK TIMES INDEX	G. CAM	CBI
FINANCE COMPTABILITE	a) Analyse de réglementation	ISIS (CCIP)	ACCOUNTANT INDEX	G. CAM	LOCKHEED, SDC, DATA STAR
	b) Marchés financiers	INVES DATA	CONTROL DATA	INVES DATA	CONTROL DATA
	c) Informations crédit-clients	DAFSA/ SNEI (Kompass)	DUN and BRADSTREET	SPIDEL	DUN and BRADSTREET
TECHNIQUE PRODUCTION	a) Brevets	INPI (Institut national de la propriété industrielle)	WPI	TELESYSTEMES PTT	SDC
	b) Surveillance technologique	PASCAL (CNRS)	SSIE	TELESYSTEMES	SDC, LOCKHEED
DEVELOPPEMENT INTERNATIONAL	a) Climat international	ISIS (CCIP)	FINANCIAL TIMES	G. CAM	LOCKHEED, SDC
	b) Opportunités d'affaires	TELEMAQUE	PREDICASTS	G. CAM	DATA STAR
	c) Réglementation	DOC EXPORT (CCIP)		G. CAM	G. CAM
ECONOMIE	a) Suivi de l'activité économique générale	BIPA (Documentation française)	ECONOMIC ABSTRACTS INTERNATIONAL	TELESYSTEMES	LOCKHEED
	b) Conjoncture et prévision	ECOFUTUR (Bureau d'information et de prévision économique-BIPE)	DATA RESOURCES (Filiale de McGraw Hill)	G. CAM	DATA RESOURCES (McGraw Hill)
JURIDIQUE	Environnement juridique de l'entreprise	SYDONI (Conseil de [illegible] et Dalloz)	CELEX MEAD DATA CONTROL	G. CAM TELECONSULTE (accord avec Mead, Data, Control)	EURIS
	a) Sources françaises	LEXIS			
	b) Sources internationales (textes, jurisprudence, conventions collectives)	CEDIJ (Organismes publics et CNPF)			

/Key on following page/

Table of Major Data Banks: Key

1. Functions

General management
Marketing
Finance/accounting
Technique/production
International development
Economic
Legal

2. Principal types of data

a) Perfecting of strategy
b) Diversification

a) Competition
b) Industrial sectors
c) Markets for firm

a) Analysis of regulations
b) Markets for financing
c) Client credit information

a) Patents
b) Technological surveillance

a) International climate
b) Business opportunities
c) Regulation

a) Monitoring of general economic activity
b) Contingency analysis and forecasting

Legal environment of the enterprise

a) French sources
b) International sources (texts, jurisprudence, collective agreements)

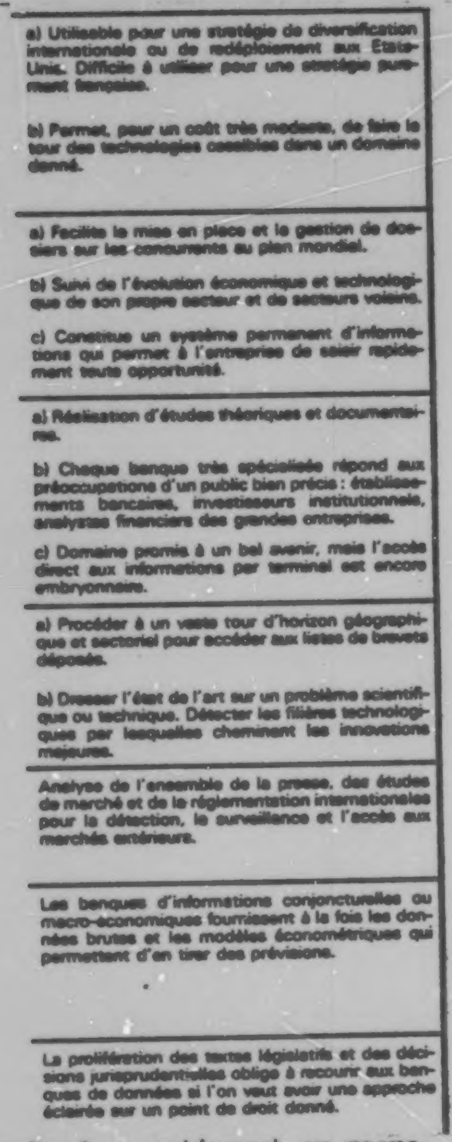
3. Names of major French and International data banks

GRAPPE (Permanent Union of Chambers of Commerce)
TRANSINOVE (National Scientific and Technical Information Bureau and ANVAR [National Agency for Research Valorization]
FITEC [Fiduciary for Accounting Technique and Expertise]
ISIS [International Selected Ideas and Systems]
CCIP [Paris Chamber of Commerce and Industry]
DAFSA [Financial Data and Analysis]
SNEI [National Industrial Expertise Company?]
INPI [National Industrial Property Institute]
CNRS [National Scientific Research Center]
BIPE [Economic Information and Forecasting Bureau]
SYDONI (Notaries' Council and Dalloz)
CEDIJ (Public Agencies and National Council of French Employers)

4. Telematic Service Nets, French and International

G. CAM (Deposit Account)
CISI (Atomic Energy Commission affiliate)
PTT [Posts, Telegraphs, and Telephones]
G. CAM TELECONSULTE (agreement with Mead, Data Central)

Remarks



a) Utilisable pour une stratégie de diversification internationale ou de redéploiement aux Etats-Unis. Difficile à utiliser pour une stratégie purement française.

b) Permet, pour un coût très modeste, de faire le tour des technologies cessibles dans un domaine donné.

a) Facilite la mise en place et la gestion de dossiers sur les concurrents au plan mondial.

b) Suivi de l'évolution économique et technologique de son propre secteur et de secteurs voisins.

c) Constitue un système permanent d'informations qui permet à l'entreprise de saisir rapidement toute opportunité.

a) Réalisation d'études théoriques et documentaires.

b) Chaque banque très spécialisée répond aux préoccupations d'un public bien précis : établissements bancaires, investisseurs institutionnels, analystes financiers des grandes entreprises.

c) Domaine promis à un bel avenir, mais l'accès direct aux informations par terminal est encore embryonnaire.

a) Procéder à un vaste tour d'horizon géographique et sectoriel pour accéder aux listes de brevets déposés.

b) Dresser l'état de l'art sur un problème scientifique ou technique. Détecter les filières technologiques par lesquelles cheminent les innovations majeures.

Analyse de l'ensemble de la presse, des études de marché et de la réglementation internationales pour la détection, la surveillance et l'accès aux marchés extérieurs.

Les banques d'informations conjoncturelles ou macro-économiques fournissent à la fois les données brutes et les modèles économétriques qui permettent d'en tirer des prévisions.

La prolifération des textes législatifs et des décisions jurisprudentielles oblige à recourir aux banques de données si l'on veut avoir une approche éclairée sur un point de droit donné.

a) Usable for a strategy of international diversification, or for redeployment to the United States. Difficult to use in a purely French strategy.

b) At very modest cost, permits a survey of transferrable technologies in a given field.

a) Facilitates setting up and control of worldwide competitor files.

b) Monitoring of economic and technological evolution of own and adjoining sectors.

c) Constitutes a permanent information system permitting an enterprise rapidly to grasp any opportunity.

a) Completion of theoretical and documentary studies.

b) Each highly specialized bank responds to the concerns of a sharply defined public: banking establishments, institutional investors, and financial analysts for large firms.

c) A field with a promising future, but direct access to information by terminal still in its infancy.

a) Offers quick geographical and sectorial survey to obtain list of patents filed.

b) To ascertain state of the art on a scientific or technical problem, or detect technological channels through which move major innovations.

For comprehensive analysis of press reports, market studies, and international regulations, to determine, monitor, and enter foreign markets.

Banks for contingent or macroeconomic data provide both raw data and econometric models for forecasting.

Proliferation of legislation and legal decisions compels recourse to data banks for clear grasp of particular points of law.

6145
CSO: 5500/2172

END

JPRS 81234

8 July 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 226

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 81234

8 July 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 226

CONTENTS

WORLDWIDE AFFAIRS

Briefs

Argentine Jamming Ends 1
USSR-Sweden Radio-TV Protocol 1
Yugoslavia, Turkey Radio, TV Accord 1

ASIA

AUSTRALIA

Briefs

Cable Link With Canada 2

BANGLADESH

Reporter Tells Trouble of Dacca Telephone System
(Musleh A. Tarek; HOLIDAY, 23 May 82) 3

Official Tells Plans to Expand Telecom System
(THE BANGLADESH TIMES, 2 Jun 82) 5

General Ershad Opens Television Relay Station
(THE BANGLADESH TIMES, 11 Jun 82) 7

Briefs

Rangpur Radio Station 9

INDIA

Northeast Seeks Early Television Coverage
(PATRIOT, 2 Jun 82) 10

Briefs

'AIR' Uses Satellite Relay 11
Broadcasts Through INSAT 11

INDONESIA

Pacific Island Nations Want to Purchase Satellite
(KOMPAS, 6 May 82) 12

PEOPLE'S REPUBLIC OF CHINA

Briefs
Guangdong Power Outage 14

VIETNAM

Briefs
Phu Ca Transmission Station 15
North-South Telephone Links 15
Binh Tri Thien Telephone Switchboard 15
Dac Lac Telephone Line 15

EAST EUROPE

CZECHOSLOVAKIA

Deputy Minister Outlines 1982-1985 Postal Service Program
(Ivan Laska; PTT REVUE, No 2, 1982) 16

LATIN AMERICA

BARBADOS

Phone Company Operational Improvements Praised
(ADVOCATE-NEWS, 28 May 82) 27

Briefs
Ship-To-Shore Radio 28

BERMUDA

Plans for Giant C & W Antenna Dish Moving Ahead
(THE ROYAL GAZETTE, 31 May 82) 29

COSTA RICA

New Cultural, Educational Radio Station Inaugurated
(Enoc Hernandez; LA NACION, 25 Apr 82) 31

CUBA

Briefs
Cuban-Mexican Telephone Line 33

PARAGUAY

Communications Contract To be Approved
(HOY, 18 May 82) 34

NEAR EAST AND NORTH AFRICA

INTER-ARAB AFFAIRS

Arab Computer for Satellite Communications
(AL-SIYASAH, 8 May 82) 35

IRAN

Briefs

'IRNA' International Satellite Network 36

SUB-SAHARAN AFFAIRS

BENIN

Earth Station for Worldwide Communications To be Built
(G. Adissoda; EHUZU, 7 May 82) 37

CAPE VERDE

Earth Satellite Station To be Built With French Aid
(VOZ DI POVO, 22 May 82) 38

GHANA

Possible Rain Damage to Automatic Telephone Exchange Equipment
(Nelson Duah; DAILY GRAPHIC, 4 Jun 82) 40

SOUTH AFRICA

TV Viewing Changes Black Lifestyles
(THE CITIZEN, 23 Jun 82) 41

WEST EUROPE

FINLAND

Prime Minister: Cable TV Law Should Prevent Monopolies
(UUSI SUOMI, 20 May 82) 43

Briefs

State Radio Participating in Euricon 44

SWEDEN

Sweden to Join Euronet/Diane in Summer
(Hans Werner; NY TEKNIK, 22 Apr 82) 45

UNITED KINGDOM

British Send Unamplified Signal 102 KM Over Optical Fiber
(MODERN ELEKTRONIK, 1 Apr 82) 47

BRIEFS

ARGENTINE JAMMING ENDS--The jamming by Argentina of BBC broadcasts to the country and to the Falkland Islands has ceased. Engineers in Britain say it ended before the scheduled transmissions yesterday of the BBC English language program "Calling the Falklands" and the BBC's Spanish service to Argentina. The jamming began on 3 May and initially affected the Spanish service before it was extended. Recently it became more intensive, but it is not clear how effective it has been. [Text] [TA160411 London BBC World Service in English 0400 GMT 16 Jun 82]

USSR-SWEDEN RADIO-TV PROTOCOL--Moscow, 3 Jun, TASS--The USSR State Committee for Television and Radio Broadcasting (Gosteleradio) and the Swedish National Radio have signed a working protocol on cooperation in 1982 here today. It provides for a further increase in radio broadcasts about the life of the Soviet and Swedish peoples and mutual assistance in the preparation of programs about the most important events in the USSR and Sweden. Special attention is paid to material devoted to the 60th anniversary of the formation of the Union of Soviet Socialist Republics. [Text] [Moscow TASS in English 2026 GMT 3 Jun 82 LD]

YUGOSLAVIA, TURKEY RADIO, TV ACCORD--A protocol on cooperation between Yugoslav radio and television and Turkish radio and television was signed in Pristina today, providing for exchange of programs, cadres and equipment, "which is to contribute to better informing and rapprochement of the peoples and nationalities of the two countries, and to learning better about the social and political situation in them." [Pristina Domestic Service in Serbo-Croatian 2000 GMT 2 Jun 82 AU]

CSO: 5500/2270

BRIEFS

CABLE LINK WITH CANADA--Canberra,28 May (AFP)--More than 1,000 submarine repeaters will be used in the new cable from Sydney to Vancouver. Announcing this today, Minister for Communications Neil Brown said the new Anzcan overseas communications cable would involve the establishment of a new factory near Sydney costing U.S.$10 million and providing work for nearly 300. The contract to supply and install the cable, costing U.S.$300 million was won by STC of the United Kingdom, while the Nippon Electric Company of Japan at a cost of U.S.$30 million will install a spur line between Norfolk Island off the coast of Australia and Auckland, New Zealand, so linking the three points together. It will be a boost to telecommunications production in Australia and improves Australia's telecommunications with New Zealand and Canada. [Text] [BK281313 Hong Kong AFP in English 1215 GMT 28 May 82]

CSO: 5500/5838

REPORTER TELLS TROUBLE OF DACCA TELEPHONE SYSTEM

Dacca HOLIDAY in English 23 May 82 pp 3, 7

[Article by Musleh A. Tarek]

[Excerpt] The number of applications for approval of new telephone connections pending before the Dacca Telephone region authority (Dacca city) is around 55 thousand.

Of these about 7 thousand applications have remained pending since 1974 due to shortage of cables and lack of capacity of the different exchanges of the Dacca telephone region.

Out of these 55 thousand applications, about 30 thousand have been lying in the central exchange, 15 thousand in the Maghbazar and Sher-e-Bangla nagar exchange and the rest in the Gulshan exchange.

The growth rate of approved subscribers of Dacca telephone region has fallen far below the targets. The reliability of telephone services to the existing consumers also shows no sign of improvement.

The demand for telephone connections has been increasing every day in the Dacca city. But no serious step has so far been taken to cope with the situation either by raising the number of exchanges or replacing the time-worn F-1 and EMD type automatic exchanges.

The F-1 and EMD type automatic exchanges supplied by West Germany have become outdated as they are prone to develop technical defects. However, the telephone authority has started removing the F-1 type exchanges to connect all automatic telephone lines with the EMD type exchanges.

Capacity

The Dacca telephone region has now an overall capacity of around 60 thousand telephone lines. The most crowded exchanges are Gulshan and Maghbazar with five and ten thousand capacity resprectively.

Currently, there are nine automatic exchanges in Dacca including Narayangonj. The central exchange is to bear the heaviest load which has exceeded the actual capacity of 19,000 lines and the capacities of Sher-e-Bangla Nagar, Mirpur and Narayangonj exchanges are 9,000,3600, and 300 lines respectively.

Despite the rush of new applications for telephone connection, the Dacca telephone region has no immediate plan of massive expansion of their services except setting up a 10,000 line telephone exchange at Nilkhet.

It is learnt that the general telephone subscribers have been facing serious problems due to frequent disruptions of telephone connections, distturbances by cross-connections and absence of dial tone.

CSO: 5500/7155

OFFICIAL TELLS PLANS TO EXPAND TELECOM SYSTEM

Dacca THE BANGLADESH TIMES in English 2 Jun 82 pp 1, 8

[Text] Rear Admiral M A Khan, Chif of Naval Staff and Deputy Chief Martial Law Administrator, said on Tuesday that the Government had attached priority to the plan to link the thana headquarters with subdivision, districts and the capital through tele-communication.

The DCMLA, who is also Adviser in-charge of the Ministry of Communication, addressing a Press conference in Dacca, said that 44 thana headquarters, which were now outside the telecommunication network, would have public call offices within next two to three years.

He said that in view of its importance in overall development of the country the Government had paid special attention to the development of telecommunication system in Dacca and other places of the country. This policy would also be reflected in the next year's Annual Development Plan, said.

Crash Programme

The DCMLA said that a crash programme was underway for the speedy development of telephone system. He said that there was a proposal to enable Telephone and Telegraph Board to obtain loans from the commercial banks to implement the crash programme.

He said that a total of Taka 321 crore had been earmarked for T&T Board in the Second Five Year Plan (1980-85). The next financial year's allocation amounted to Taka 60 crore, he said.

Rear Admiral Khan said that all district headquarters would be linked with the capital through Subscribers' Trunk Dialing system (STD) By the end of nexth financial year. He said that district headquarters of Jamalpur, Tangail and Patuakhali would receive STD connections by the end of next year.

He said that SFYP planned for installation of over 75,000 lines hroughout the country. With the propoer execution of all the development programmes, the country would have another 12,800 telephone lines during next financial year, he said adding that the capacity of the exchanges in Dacca city would also be expanded to meet the growing demand of the subscriberrs.

The DCMLA said that following the replacement of telecommunication satellite (Intersat-4) over the Indian Ocean, the Betbunia earth satellite station was being modified. The work on modification would be completed by next month. He said that another satellite station at Kalibabad was now in operation.

Rear Admiral Khan said that the country at present had 389 automatic and manual telephone exchanges with equipped capacity of 1,52,444 lines The exchanges had now 1,04,973 working connections, he said.

Dacca Exchanges

The DCMLA said that eight telephone exchanges in and around Dacca city had 56,000 working connections as against the equipped capacity of 62,000 lines. He said that the number of pending demand for telephones at the moment was about 28,000.

He said that T&T Board did not have necessary funds for providing new lines. A new telephone line in the city costs T&T about Taka 26,000 to Taka 28,000, he said.

Describing the capacity of telex exchanges as sufficient, the DCMLA said that T&T Board was capable of installing more telex lines in view of the availability of adequate lines.

Complaints

Replying to a question, Admiral Khan said that T&T Board in Dacca city received, on an average, 800 to 850 complaints daily from the subscribers.

On the delay in delivery of telephone bills to the subscribers he said that instructions had been issued to keep the telephone bills in the telephone building for the first five days of the month so that the subscribers could collect their bills from there personally. If any body failed to collect his bill, it would be sent by post as usual.

On the complaint regarding excess bills, the DCMLA said, a committee headed by a T&T official not below the rank of a director, would take the average amount billed for a period of six months and correct the bill, if necessary.

He said that T&T would be able to deliver a new Telephone Directory after two months.

The DCMLA told a questioner that the total outstanding amount with T&T subscribers was Taka nine crore upto May 1, 1982. He said that Taka five crore had been realised as arrear from the subscriber after the proclamation of Martial Law.

CSO: 5500/7156

GENERAL ERSHAD OPENS TELEVISION RELAY STATION

Dacca THE BANGLADESH TIMES in English 11 Jun 82 pp 1, 8

[Text] MAIJDI COURT (Noakhali, June 10: The Chief Martial Law Administrator, Lt. Gen. H. M. Ershad, said here today that the code of broadcast for Bangladesh Television should have to be formulated keeping in view the national goals and objectives, reports BSS.

Inaugurating the country's seventh TV relay station the CMLA stressed the imperative need for effective utilisation of this particular communication medium for inspiring the people to participate in the socio-economic development programmes.

He said, the main objective of media in an independent and sovereign country was to extend communication support to the people in achieving their cherished goal. The media through their sincere efforts should forge close links between the people and the Government.

The CMLA said that Television was now recognised as an effective medium for imparting education and dissemination of information besides means of recreation. This medium is to be utilised in a bigger way in socio-economic life of the people instead of confining its fole within urban-oriented recreation, he pointed out.

General Ershad said that the role of mass media could not be completed without reflecting the hopes and aspirations of the people and their religious and social values.

He expressed the hope that Bangladesh Television would remain alive to its responsibility and play its role in all fields education, literature and culture.

The CMLA said, television had a tremendous impact or the life of the people and observed that it should discard programmes inconsistent with national objectives and values however recreative and attractive those might be.

Earlier speaking on the occasion, the Secretary, Ministry of Information Mr Khorshed Alam said that with the commissioning of the TV relay station at Maijdi Court, 85 per cent area of the country would now come under TV network.

He said, two more relay stations at Rangamati and Cox's Bazar would be commissioned shortly to bring the entire country under TV transmission.

The inauguration ceremony was attended, among others, by the Minister for Local Government, Mr Mahbubur Rahman and the Zonal Martial Law Administrator of Zone-D and GOC 33 Infantry Division, Major General M A Samad.

The country's seventh television relay station commissioned here today will cover an area of 60 miles in radius bringing the district of Patuakhali and off-shore islands within the BTV network.

Gen. Ershad formally inaugurated the station by switching on the transmitter at a ceremonial function held at the Town Hall. Later, he went round the technical section of the station.

The 10 kilowatt TV relay station at Maijdi Court has been erected at a cost of about Taka 85 lakh. The station started its test transmission from May 1 this year through channel number 12.

Two more TV relay stations, one each at Rangamati and Cox's Bazar, which have already been put on trial transmission will be commissioned shortly.

CSO: 5500/7157

BRIEFS

RANGPUR RADIO STATION--A 10 K.W medium wave transmitter replacing the old one was commissioned at Rangpur Station of Radio Bangladesh on Friday, reports BSS. The Bulgarian transmitter, which is one of latest designs was installed in record time It is expected that reception in Rangpur and its surrounding areas will improve with the commissioning of the new transmitter. The Chief Martial Administrator, Lt General H.M Ershad ordered the installation of a new transmitter at Rangpur Station of Radio Bangladesh during his visit to Rangpur on April 20. [Dacca THE BANGLADESH OBSERVER in English 16 May 82 p 1]

CSO: 5500/7154

NORTHEAST SEEKS EARLY TELEVISION COVERAGE

New Delhi PATRIOT in English 2 Jun 82 p 5

[Text]

THE Northeastern Council has sought the Planning Commission's approval for a Rs 28 crore plan to introduce television in that sensitive border region in the "shortest possible time involving minimum expenditure", reports UNI.

The Council has expressed the view that introduction of television in the region could not be postponed indefinitely. Besides, the setting up of a full-fledged Doordarshan Kendra at Gauhati in Assam as envisaged in the Sixth Plan would be 'woefully inadequate.'

The Council notes that the establishment of Doordarshan Kendras in each of the seven States in the region—Arunachal Pradesh, Assam, Nagaland, Manipur, Meghalaya, Tripura and Mizoram—and then expanding the coverage to hilly areas through additional transmitters is not only an expensive proposition but would take several years to complete.

The Council says the plan for installing television transmitters of different capacities at various places in the seven States is a "compromise between the ideal goal and the present position of a total absence of television in the region."

It has sought the Planning Commission's speedy sanction as the Council has no provision to meet the estimated outlay for this scheme. The Council says that its Non-Lapsable Fund (NLF) commitments are already so heavy that financial resources could not be released from this source, therefore, additional sources have to be found.

In addition to the transmitters, ten low power translators are also needed in some pockets where coverage is not available from the main transmitter. The location of these translators will be decided after the transmitters are energised and survey of the field strength made.

The Council pleads for provision of a 12 television transmitters in the seven States.

The Council has sought clearance from the Planning Commission to take up the installation of seven of these television transmitters in the first phase. It has pressed for necessary allocation to proceed with this scheme without any delay to reduce the impact of Bangladesh television.

Under the plan, the Council has said since it would take time to select or acquire sites or construct buildings, it proposes to employ 'expeditious measures' whereby they could hire or purchase outright buildings for housing low power transmitters.

The Council has suggested that where low power transmitters are not readily available, they could be imported.

The overall expenditure envisaged was Rs 25.7 crores by way of capital, two crores as annual recurring and Rs 1.80 crores as non-recurring revenue expenditure.

The working group on introduction of television in the north-eastern region had expressed the view that the Indian National Satellite (INSAT) would not be useful because of the difficult terrain. The group had recommended terrestrial transmitters.

CSO: 5500/7152

BRIEFS

'AIR' USES SATELLITE RELAY--All-India Radio [AIR] has started using satellite Insat-I IA to relay the central news bulletins and other programs. Already listeners in Hyderabad and Ahmedabad are enjoying this benefit. The quality of the relay through the satellite has been found considerably superior to that of the shortwave beamed transmission hitherto provided. In the next few weeks another 12 stations of AIR, including Gauhati and Srinagar, are expected to be linked by Insat. They are being provided with the necessary receiving facilities. [Text] [BK071400 Delhi Domestic Service in English 120 GMT 7 Jun 82]

BROADCASTS THROUGH INSAT--NEW DELHI, June 7--Hyderabad and Ahmedabad stations of All-India Radio are now relaying national news bulletins and other programmes beamed through INSAT-1A. India's communications satellite, reports PTI. The satellite link facility is being used by AIR from 7 A.M. to 9.15 A.M. and between 7 P.M. and 9.30 P.M. Receiving facilities are being provided to 12 other stations of AIR, including Gauhati, and Srinagar The quality of transmission through the satellite is found to be far between than that of the short-wave relay. [Calcuata THE STATESMAN in English 8 Jun 82 p 1]

CSO: 5500/7153

PACIFIC ISLAND NATIONS WANT TO PURCHASE SATELLITE

Jakarta KOMPAS in Indonesian 6 May 82 p 2

[Article: "Palapa A Satellite Is Still of Use Though Its Mission Is Nearly Ended"]

[Text] The Palapa A Satellite, whose mission will be completed in mid-1983, can still be used for training and research and development activities for the Department of Communications.

This was confirmed by Achmad Thaher, secretary general of the Department of Communications, in response to a newsman's question regarding the interest of a number of South Pacific islands in buying the Palapa A satellite.

The satellite, which has 12 transponders that are used for communications purposes, was launched on 16 June 1976 and its effectiveness was to diminish within 7 years. At present it is positioned over Sri Lanka. Satellite B, with 24 transponders, will be launched in mid-1983 to replace the Palapa A satellite which cost $76 million. No announcement has yet been made of the cost of the second satellite which is twice as powerful as the earlier satellite.

Nations in the group of South Pacific islands remain convinced that the Palapa A satellite will be economically worthwhile for 5 more years though it is believed to be of no value by the end of 1983. On that basis, these nations have conducted a number of negotiations on the possibility of purchasing this satellite.

Role of Columbia

A KOMPAS source explained that the strong desire on the part of a number of South Pacific island nations to purchase the Indonesian satellite arises from their opinion that the electronic capability of this satellite will enable it to carry out its mission for several more years.

They say that only the fuel in the satellite needs to be "replenished." The power of that fuel will diminish when its 7-year life ends. This caused the satellite orbit to waver.

The satellite, which is positioned at 3,600 kilometers above the earth's surface, could be refueled in the coming period by using the Columbia space vehicle as a workshop.

Repeated successful tests have been made of the Columbia vehicle while the possibility of refueling the communications satellite will be discussed with Hughes Aircraft, the company which built the satellite.

On questioning the KOMPAS source as to whether the refueling would be accomplished by Indonesia, considering its very crucial role, the source explained that no thought has yet been given to the matter because in addition to the satellite being of use despite its greatly diminishing effectiveness, by mid-1983 Indonesia will have the Palapa B satellite which is twice as powerful as the first satellite and its life possibly may be twice as long as that of Palapa A.

6804
CSO: 5500/8504

BRIEFS

GUANGDONG POWER OUTAGE--The transmission of the Guangdong television station was suddenly broken at 1835 hours on 6 June and did not return to normal until 2037 hours. At 1815 hours, the Guangzhou Municipal Power Company provisionally informed the departments concerned of the television station that power supply to the transmitter would be cut, as urgent repairs were needed following an accident to a power installation near the Zhongshan Memorial Hall. The power supply to the station was cut at 1835 hours. The station had a standby generator, but it failed to start because it had not been regularly maintained. As a result the transmission of television programs was interrupted for nearly 2 hours. Transmission was restored for 7 minutes at 2000 hours, but was cut again as the generator could not operate normally. The programs of the Guangdong radio station were simultaneously interrupted for the same reason. [Text] [HK070236 Guangzhou Guangdong Provincial Service in Mandarin 2350 GMT 6 Jun 82]

CSO: 5500/4019

BRIEFS

PHU CA TRANSMISSION STATION--Phu Cat District of Nghia Binh Province has commissioned a 40-watt ultrashortwave transmission station with a 40-km operational radius to support propaganda work on the party's lines and policies. The station is fully equipped in accordance with the specifications of the Central Radio and Television Commission. [Hanoi Domestic Service in Vietnamese 2300 GMT 9 Jun 82 BK]

NORTH-SOUTH TELEPHONE LINKS--The General Post and Telegraph Department on 4 4 June officially put into operation a new telephone network linking Hanoi with Danang and Ho Chi Minh cities and Minh Hai Province. As a result, telephone calls can now be made directly between Hanoi and 16 provinces along Route 1-A and Route 4. [Hanoi Domestic Service in Vietnamese 2300 GMT 7 Jun 82 BK]

BINH TRI THIEN TELEPHONE SWITCHBOARD--The Binh Tri Thien provincial post and telegraph sector has completed the installation of an automatic telephone switchboard in Dong Ha City. The switchboard, with a total of 400 lines, has been commissioned 2 months ahead of schedule. [Hanoi Domestic Service in Vietnamese 2300 GMT 9 Jun 82 BK]

DAC LAC TELEPHONE LINE--The postal office of Dac Lac Province recently completed a 70-kilometer telephone line linking Ban Me Thuot with (M'drak) districts. This is a mountainous area and workers have overcome numerous difficulties and ordeals in establishing this telephone line. [Hanoi Domestic Service in Vietnamese 0400 GMT 6 Jun 82]

CSO: 5500/5838

DEPUTY MINISTER OUTLINES 1982-1985 POSTAL SERVICE PROGRAM

Prague PTT REVUE in Czech No 2, 1982 pp 34-39

[Article by Docent Engr Ivan Laska, CSc, federal deputy minister of communications: "Tasks of the Post Office and Postal Newspaper Subscription Service in 1982-1985"]

[Text] The orientation of the 1981-1985 activity of the Post Office and PNS [Postal Newspaper Subscription Service] sector, similarly as of the other sectors within the Ministry of Communications, is set in the "Plan of Measures for Implementing the Conclusions of the 16th CPCZ Congress Within the Ministry of Communications."

Main attention and effort are directed primarily toward improving the quality of the provided services and, in accordance with the "Set of Measures for Perfecting the Planned Management System Within the Ministry of Communications After 1980," putting in place and perfecting a system for managing the quality of Post Office and PNS operations.

Audits by VLK CSSR [Federal People's Control Committee] in 1980 and 1981, and subsequent audits, investigations and examinations of accounts by departments of FMS [Federal Ministry of Communications], URS [Central Communications Directorate] in Prague, and URS in Bratislava, produced a series of important conclusions and suggestions for the elimination of the shortcomings in the operations of the Post Office and PNS. On the basis of the results of the audits conducted by the Federal People's Control Committee, the federal minister of communications issued "Measures for the Elimination of the Shortcomings Uncovered by the Federal People's Control Committee in Its Audit of Creating the Prerequisites for Ensuring the Quality of Postal Operations in the CSSR." This is an extensive set of 21 tasks for the deputy ministers of communications and departments of the Federal Ministry of Communications, and 15 and 14 tasks for the central directors of URS Prague and URS Bratislava respectively.

The securing of these demanding tasks and implementation of the adopted measures depend to a considerable extent on the quality of management in the Post Office and PNS sector. Significant from this point of view are the "Programs for the Development of the Management of Communications After 1980, Post Office and PNS Sector," that were prepared within the individual communications organizations, in line with the Set of Measures.

So far as 1982 is concerned, the appropriate tasks are a part of the individual communication organizations' implementation plans for 1982. These plans are closely linked to the results that the Ministry of Communications achieved in 1981.

The basic tasks and directions of activity for ensuring fulfillment of the annual implementation plans are contained in the directives that the minister of communications issues each year, and are discussed at an all-state economic-policy aktiv of the ministry. This was the case also in 1981 when the 11th All-State Aktiv, held in December in Bratislava and divided into a Post Office Section and a PNS Section, evaluated fulfillment of the 1981 tasks, amended and supplemented the existing tasks and also formulated new ones for 1982. The feasibility of evaluating collectively and professionally the results of activity in the year just ending, the setting of timely new tasks, the amending and supplementation of the measures already adopted --but always from the viewpoint of the overall objectives for the five-year period, and of the effective developmental documents and concepts of the ministry and of the given sector--are the greatest contribution and benefit of the all-state aktivs.

Let us comment briefly on the evaluation of the principal results achieved in 1981, since these are the basis for setting realistic tasks and objectives for 1982.

In the area of receiving mail and payments, the prerequisites were created for extended office hours at 1100 post offices, and the hours have been unified according to the size of the communities and the categories of post offices. To reduce waiting time, especially in the remittance of payments at the busiest post offices, 319 multiple check and money order windows have been set up since the issuance of the appropriate measures, and split shifts have been introduced at other post offices for the purpose of reinforcing the staff during the afternoon rush hours. The acquisition of Facit 2301 electronic duplex adding machines, to replace the already worn out Addo-X adding machines, is also helping to speed up the processing of money orders and other payment documents.

Despite these favorable results in the area of receiving, there are also other reserves, particularly in the way the staff treats the public and provides useful information to postal customers.

As the primary qualitative indicators in transporting mail, obligatory limits have been set for the delivery of letters and parcels. Checks showed that the individual organizations met these limits for 96.4 to 98.8 percent of the pieces of mail transported. The main causes of the delays were shortcomings in collection from letter boxes, understaffing of the workplaces, failure to observe the technological procedures in processing mail, frequent breakdowns of the railway mail cars, and delays in rail and air transport.

The mechanization of processing continued with the installation of an IPF 80/D semiautomatic letter sorting machine in Ostrava and the completion of the development of this machine. Five such machines were supplied from series production in 1981.

To eliminate heavy physical labor in the handling of parcels, a semi-automatic parcel sorting machine with conveyor belts was installed in Ceske Budejovice-Nemanice, already the eighth such system in Czechoslovakia. Installation of a similar system has been completed at the Liberec 2 railroad-station post office. The containerized transportation of mail underwent further growth and has already been introduced at 96 post offices. The number of containers transported in 1981 exceeded 100,000.

In mail delivery, through a redistribution of the motor vehicles, we have been able to motorize 120 more rural delivery routes. For greater efficiency in the use of the motor vehicles, mail boxes have been grouped together along the roads.

During the first three quarters of this year, through thorough control and by uncovering the sources of losses, the number of lost, damaged or stolen pieces of mail was reduced by 2.87 percent in comparison with the same period of last year.

In conclusion the Post Office Section established that the tasks formulated in the 1981 directive of the minister of communications were fulfilled.

The PNS successfully fulfilled the tasks in conjunction with the dissemination of party newspapers, and the planned number of copies was exceeded by about 3 percent. In comparison with the previous year, subscriptions to party newspapers increased considerably, and the number of subscribers (on 30 September 1981) rose by more than 100,000. Fulfillment of the set quality indicators and implementation of the PNS Rules contributed significantly to this result.

The orientation of the activity of the Post Office and PNS, and their tasks for 1982 are in accord with the aforementioned basic approach that has been projected into the 1982 directives of the minister of communications, and also into the conclusions of the Post Office and PNS Sections of the 11th All-State Aktiv (Bratislava, December 1981).

Because of their scope, it is not possible to list in this article (and even less to comment on) the individual tasks. Nor is this necessary, in view of the fact that the directives of the minister of communications have been made available to the individual organizations and have been elaborated into the principal tasks of the communications organizations; furthermore, appropriate political-organizational measures have been adopted--in cooperation with the local party and trade-union committees--to acquaint the workers with these tasks.

Basically the following principal tasks are involved:

To strive for further improvement of the quality of postal operations and consistently eliminate the shortcomings established by the Federal People's Control Committee. For upgrading the quality of postal operations as effectively as possible, to utilize the indicators of the quality of postal operations. In the case of establishments rated as quality grade II or lower, to apply the principle of the managers and workers' personal responsibility, and of linking their economic incentives to the quality of the provided services. To upgrade the managers' work, including an increase in the proportion of managers who fully meet the qualificational and other requirements.

To further reduce the waiting time in receiving, through suitable agitation and managing work, by suitably combining the work stations, by establishing multiple check and money order windows, and by equipping the work stations with small- and medium-scale mechanization. In agreement with the national committees, to complete the introduction of uniform office hours, in accordance with the size of the communities and the categories of post offices. To thoroughly evaluate the experience with uniform office hours (from the viewpoint of operations, the public, and effectiveness). To provide a more civilized environment, improve treatment of postal customers and ensure that they are better informed about the services provided, and also about their rights as well as their obligations.

In conjunction with the curtailment of the carriage of domestic mail by air, and with the lower limits on fuels and lubricants, to organize substitute surface transportation based on the railroad network. To utilize all local possibilities to reduce the volume of mail transported by motor vehicles. At all organizations and both Central Communications Directorates, to create all the prerequisites for maintaining a higher proportion of railway mail cars in operating conditions, because these cars must take over the bulk of the load from the abolished highway and air routes. To discuss the feasibility of buying cars of a suitable type from the CSD [Czechoslovak State Railways]. And simultaneously to improve the quality of the dispatcher control of transportation.

To continue with the implementation of all the rationalization measures in the area of mail delivery, to expand the motorization of rural delivery routes through a redistribution of motor vehicles within the communications organizations, and to install additional mail boxes for letters and parcels.

To continue with the consistent implementation of the program for mechanizing and automating the technological processes within the Post Office and PNS, particularly with developing the machine processing of letters. In 1982, to place in operation IPF 80/D semi-automatic sorting machines at the Most, Prerov, Bratislava and Kosice transportation centers. To begin the installation of an automatic sorting line in Bratislava, of an automatic separating and cancelling machine in Bratislava and of five more semi-automatic letter-sorting machines in Prague, Cheb, Hradec Kralove, Brno and Nove Zamky. In accordance with the schedule of the machines' delivery and installation, to ensure at all the investor organizations the technical and technological conditions for the smooth flow of installation work. In actual operation, to concentrate all organizational efforts on the effective utilization of all such equipment and on optimizing the technological processes. The professional sections of the supervising organizations and the Central Communications Directorates must verify, within the framework of their controlling activity, that these machines are being used effectively and are being maintained as prescribed.

To ensure constant effectiveness of organization and control in the course of making more effective the PNS Rules and Regulations. Simultaneously to improve and make more economical deliveries of publications between the two republics, devoting special attention to Prague and Bratislava. To substitute highway transportation for the abolished air carriage of mail in transporting the Slovak dailies to Prague, and to ensure that these newspapers are distributed in Prague before noon.

To fulfill the qualitative indicator of PNS and the indicators of returned copies, and to explain the differences between organizations in order to achieve further improvement.

To attain significant progress in processing standard projects and to computerize the handling of PNS routines.

It can be said with full responsibility that fulfillment of the 1982 tasks will not be simple. It will be necessary to further utilize the existing reserves, to apply the experience of the foremost work stations, to set higher requirements regarding the quality of work, to consistently eliminate the known and uncovered shortcomings, to substantially improve the quality of managerial work and to orient it on the introduction of new nonconventional forms of work.

Emphasis must be placed on economy in using available resources, on effectiveness and rationalization of all work, including the suppression of manifestations of bureaucracy and the curtailment of useless paperwork, and on fulfilling the plan's quantitative indicators parallel with upgrading the quality of those services where this is realistic, respectively to maintain economy even with the realization of an entire series of economization measures, particularly in the consumption of fuel and energy.

In 1982 it will be necessary to intensively develop a number of works of a conceptual or longer-term nature. These include particularly the following:

1. Reassessment of the Concept of the Development of the Post Office and PNS (prepared in 1974), and of the Amended Concept of the Development of the Post Office and PNS (prepared in 1980), with special attention to the new approaches caused particularly by the economy measures (fuels and lubricants), the orientation on rail transport, the requirements with respect to quality, and by other factors that affect operations and stem from the application of the Set of Measures, respectively from the plan for the seventh five-year period (especially for the period 1983-1985) and so on. This work will be carried out by the Federal Ministry of Communications, with the participation of the VUS [Communications Research Institute] and of selected specialists from URS Prague and URS Bratislava, and from other communications organizations.

2. Clarification of the task of technical development within the Post Office and PNS, also from the viewpoint of the existing TR [technical development] departments of the two URS's and RS's [communications directorates], with the objective of ensuring work related to territorial planning, the preparation of operational studies for the Post Office and PNS, regional concepts of the Post Office and PNS, and investment plans, including the ramifications of preparations by investors. The present situation cannot be regarded as satisfactory and well-managed.

3. Amendment of the Post Office and PNS investment program, particularly the construction of facilities where the main emphasis must be on transport (railroad-station post offices) and coordination with the Czechoslovak State Railways, in priority regions --ie., Prague, Bratislava, and North Bohemia Kraj (the basin region)--and in kraj centers. Greater activity is necessary in purposefully securing the construction of postal buildings within the framework of comprehensive housing construction, and the plans and needs for the coming 1986-1990 period must be clarified in due time, which is related to territorial planning.

It is likewise necessary to extensively employ the construction of telecommunications buildings as joint telecommunications and postal facilities; respectively, in conjunction with the construction of telecommunications buildings, to prepare in due time the reconstruction and utilization of existing buildings. Closer attention must be devoted to the optimization of the technological interrelations in conjunction with solving relocation problems.

The application of Decree No 162/80 Sb On Financing the Replacement of Capital Assets will be a significant contribution to the replacement and modernization of postal and PNS buildings. Pursuant to this decree, such replacement and modernization may be undertaken simultaneously with repairs costing up to 5.0 million korunas, provided that these costs do not exceed 50 percent of the actual cost of the capital assets. The costs of simultaneously undertaken repairs are not limited, and particularly investment limits and investment resources are not necessary for construction work undertaken in this manner. It will be necessary to utilize these opportunities aggressively and to prepare the appropriate projects, already in the course of drafting the plan for 1983.

We must achieve that the ministry's construction capacities (RVS [Communications Construction Directorate] Prague, and TUS [Technical Center for Communication] Bratislava) begin the reconstruction and modernization of postal and PNS buildings; these plans are now being elaborated (at RVS).

For 1983, the experimental construction has been prepared in Central Bohemia Kraj of a standard post office building for a community of up to 5000 residents. The sad fact remains that, despite a number of standardization projects, the actual construction of such buildings has not been undertaken so far.

As before, special attention is being devoted to preparing the construction of the Malesice postal transport building, and now also to the reconstruction of the facilities of the transportation centers at the Prague Central and Prague Main Terminals.

Furthermore it is necessary to take objectively into account the needs of Post Office and PNS operations in preparing the investment plans of the ministry for the coming periods (1983-1985 and 1986-1990).

4. The development and production base for Post Office and PNS mechanization. It is a known fact that the Post Office is the only branch of communications that does not have ensured the development and production of its technical equipment in the economy's sphere of industrial production. Despite a series of measures by the Ministry of Communications and both URS's, no significant progress has been made in managing and securing development, nor in creating the Post Office's own production base. It is necessary to consider the problems of development and production systematically in accord with the needs and possibilities, to prepare the appropriate proposals together with measures for their realization, to make decisions and to implement them forcefully and consistently. We must achieve that development be closely linked to research at the Communications Research Institute in Prague where, with the integration of the former PL [Postal Laboratories] Zilina work station, capacity has been increased and simultaneously the prerequisites have been created for the elimination of the shortcomings in managing research within the Post Office and PNS sector. Development, just as any other activity, must be planned in the framework of the five-year plans, setting priorities and defining the division of labor among the individual work stations, the coordination of the entire cycle up to the preproduction and production sphere, the economic incentives of the top officials, designers and organizations, the responsibility for the development and production of entire plants that require production cooperation, etc. To this end it is necessary to create also the normative prerequisites ("Directive for Securing the Development of Equipment for Czechoslovak Communications . . ."), and especially to gradually build the ministry's own production base which, even with the unavoidable production cooperations, must be the guarantor of the development and production of equipment for mechanizing and automating the Post Office and PNS. Besides the capacities of both Technical Centers for Communications, it is necessary to utilize and integrate the capacities of the RVS plant in Zruc nad Sazavou where some products (letter boxes) already are being made and the prerequisites exist for the introduction of additional ones. With the definition of responsibility for developing, producing and complementing deliveries of equipment for the Post Office and PNS, and with the creation of the prerequisites for the coordination of this

activity by both Technical Centers for Communications, we may justifiably expect that further potential manufacturers will be found outside the Ministry of Communications (in analogy with the capacities for the production of control equipment in East Bohemia Kraj).

Planning and design activity is closely linked with the production of technical equipment for the Post Office and PNS. Here it is necessary to have, with sufficient lead time, proven technological studies of the transportation centers, regional redirecting centers and post offices of basic significance (cooperation between the communications directorates, postal directorates and postal transportation directorates on the one hand, and Strojprojekty on the other); furthermore, the preplanning and planning documentation for new investments, and also for the reconstruction and modernization of existing facilities to make them suitable for the installation of new equipment.

Likewise linked to production is the securing of maintenance and repair capacities, and the servicing and technical care of Post Office and PNS equipment.

The supply of materials and equipment (mail bags, letter boxes, etc.) will have to improve, primarily within the activity of the two Technical Centers for Communications, and also through persistent requisitioning of materials and articles that are in short supply, by the communications organizations, including both Central Communications Directorates.

5. Automatic and mechanized processiong of first-class mail, mechanized processing of parcels and printed matter, and small- and medium-scale mechanization. The construction of automatic and semi-automatic sorting lines for first-class mail, and of semi-automatic sorting lines for parcels, is proceeding essentially in accordance with the "Amended Concept of the Development of the Post Office and PNS Under the 7th Five-Year Plan," which is an unquestionable achievement. Nevertheless it is evident that, for example in Prague, the organizational aspects of such profound technological changes as the commissioning of an automatic sorting line (NEC) were not fully appreciated. This is then reflected unfavorably in the efficient utilization of the equipment and is causing considerable other difficulties (audit of the Federal People's Control Committee). Further delays in solving the problems at the postal transportation directorates, and in completing the solution of relations between the Prague Postal Transportation Directorate and the Prague Postal Directorate, cannot be tolerated.

Simultaneously closer attention must be devoted to the preparation and discussion of operational and technological studies and to the solution of operational and organizational problems, including the implications of the regulations governing the operations of the Post Office and PNS. Here the technological changes must be taken into account, and the regulations modified.

In a number of instances (large transportation centers) it will be necessary to rely on the importation of equipment. Here it will be necessary, similarly as in the past, to strive either for direct importation or for production cooperation, and hence also for close coordination, with the communications ministries of East Germany, the Soviet Union, Hungary and Poland, in such a way that coproduction of the IPF 80/D semi-automatic sorting machines will not remain an insolated action. The Communications Research Institute in Prague, and the PN [expansion unknown] Department within the Ministry of Communications must also play a role here.

Procurement of the means of small- and medium-scale mechanization has been plan-conforming and deliberate in recent years. In principle, imports undergo trial operation managed by the Communications Research Institute in Prague, and imported equipment is selected with due consideration for reasonable price (in comparison with the prices of other equipment) and the availability of repairs, spare parts and servicing. The imports are then assigned to use, singly or in groups, but priority is given to the large post offices in Prague, Bratislava and kraj centers, thus in such a way that ensures a high degree of utilization and greater savings. Monitoring of the utilization of imported equipment has been instituted, and appropriate measures have been adopted.

6. Optimization of postal transportation, and motorization of the postal delivery service. Similarly as in the other branches of the economy, the need to save fuel and lubricants, and also motor vehicles and professional drivers, has shifted sharply into the forefront of attention. The supply of fuels and lubricants in 1982 is reduced considerably in comparison with 1981: by 13 percent for gasoline and 7 percent for diesel fuel. For the coming 1983-1985 period we must tentatively anticipate a reduction of about 4.5 percent in the supply of diesel oil (in other words, savings of 1.5 percent a year), and about 7.5 percent in the case of gasoline (2.5 percent a year); all this in comparison with 1982. In 1982 the Ministry of Communications had to cope with the cancellation of seven air routes for the carriage of mail; in their place there is only the large capacity Prague-Bratislava-Kosice route on which TU 134 A aircraft are used. This again was due to economy measures by FMD [Federal Ministry of Transportation] to save fuels and lubricants. At the same time it is quite clear that the quality of Post Office and PNS services with respect to observing the prescribed delivery time depends on on the transportation network, predominantly on the railroad network of the Czechoslovak State Railways; unlike in telecommunications and radio communication where information is transmitted by means of electromagnetic waves. In this situation the following are necessary:

--To comprehensively review the postal transportation network for the purpose of achieving further savings in fuels and lubricants, possibly without delaying the transportation of mail and publications. To this end even nonconventional methods should be used, including a mathematical approach (solution of problems of the "transportation problem" type).

--To check whether the limits on transportation time are realistic, for first-class mail and parcels as well as periodicals, where the provisions of Decree No 28/1980 regarding the delivery of publications on the same day that they appear cannot be met in isolated instances following the cancellation of air routes for the carriage of mail.

--To ensure the necessary railroad cars, specifically by leasing from the Czechoslovak State Railways and by utilizing the existing rolling stock more efficiently in 1981-1983 and by purchasing the necessary number of cars of the Zts and Fa types in 1984 and 1985. The results of intensive negotiations indicate that purchasing is realistic and will solve a problem of long standing.

--To further developed containerized transportation.

--To optimize with the help of mathematical methods the collection of mail from letter boxes (and perhaps also their location), the motorization of rural delivery (for the purpose of its further development in accordance with the conditions of the organizations), using mail boxes and mail-storage boxes.

--In addition to the above measures, to gradually upgrade the fleet of motor vehicles (when replacing them) so as to reduce the specific fuel consumption and, of course, primarily to save fuels and lubricants, by reducing and curtailing the motor vehicles and routes that are not technologically efficient. Within the Ministry of Communications, saving fuels and lubricants must not be the concern solely of the Post Office and PNS, but also of the other services as well. To this end it is necessary to substantially perfect the system of monitoring (by sectors as well as uniformly for the entire ministry), which will permit more thorough analyses and thus also responsible management.

7. Further perfection of the set of qualitative indicators and introduction of a system for managing quality. Experience with the introduction of quality indicators has been favorable, even though--so far as classification of the okres communications administrations and regional postal administration into quality grades is concerned--there is understandble effort to get into quality grade I, and thereby to obtain resources for the wage fund, in accordance with the methods now in force. To a considerable extent this tendency ties in with the subjective nature of evaluation, but this cannot be excluded because of the selected system of indicators. Control activity is the instrument for raising quality by eliminating the uncovered shortcomings. However, practical experience confirms that in most cases control is able to eliminate shortcomings only temporarily, until they recur, and therefore control activity conducted in this manner has no significant effect on raising quality. Thus it is necessary to develop a system for the comprehensive management of quality that will include also technical (technological) control. Such a system cannot be regarded as identical with existing internal control within the Ministry of Communications. The introduction of a system for managing the quality of technological processes within the Post Office and PNS must start out from a concept and must include the appropriate organizations and technical measures. For these reasons, the appropriate task has been included in the "Program for the Development of Management After 1980 in the Post Office and PNS Sector."

Work has been completed on the methods of monitoring the transit time and flows of mail and postal packets, using the methods of mathematical statistics, and to obtain reliable and reproducible results so far as transit time is concerned. Therefore the efforts to improve the quality of the provided services will necessarily lead to the perfection of the qualitative indicators and to the introduction of a system for managing quality.

8. Postal Checks and Money Orders

Since the change of the tariffs for postal services in 1979, there has been a certain decline of operations in terms of the number of postal money orders. Rationalization efforts within the Ministry of Communications also have led to a series of measures that are being implemented gradually and are known within the Post Office sector. Simultaneously, however, joint studies by the Federal Ministry of Communications, the Czechoslovak State Bank and the Federal Ministry of Finance have been going on since 1981 to streamline postal checks and money orders and to subject the present system to comprehensive analysis. The result of these studies has been a document that contains a series of measures for the individual organs and was signed in December 1981 by the ministers of communications and finance, and by the chairman of the Czechoslovak State Bank. It will be advisable to discuss these measures in a separate article. This important initiative is a further step in what is now a joint effort to perfect the system of payments. Simultaneously work has started at the Communications Research Institute in Prague and at the Research Institute for the Financial and Credit System on a new task in the state plan for economic research: "Innovation of the System of Payments." The purpose of this research task is "innovation of a higher order," the conceptual solution of a system for cashless and paperless transfers using computers. However, this is a long-term program, and therefore it is the more important not to delay the research work in question. Simultaneously a research task has been assigned to develop a new terminal for postal (cash) payments and to design a corresponding technological system.

A serious problem is also the uniform computer processing of the routines included in SIPO (centralized collection of payments from the population). At the end of 1981, the PN Department of the Federal Ministry of Communications issued "Principles for Unifying the Centralized Collection of Payments From the Population in the CSSR." At present further talks are being held and measures are being adopted to utilize the computer capacity available within the ministry; the procedure for unifying and computer processing of the SIPO routines has been the subject of considerable criticism.

9. Postal Newspaper Subrscription Service. In 1982, a new system has been worked out for importing periodicals and is now being discussed with FUTI [Federal Press and Information Office] regarding introduction as of 1983 (or 1984). We may regard as a significant result and simplification for the Ministry of Communications the change that will apply already as of 1983; under it central organs will import periodical from their own foreign exchange.

The tasks of PNS have been clarified and are set. But I find it necessary to mention with criticism the slow progress in computerizing administrative work within PNS. The work that is being conducted within the framework of Rationalization Target Program R 11 is proceeding too slowly, and the quality of coordination and management is poor. The Ministry of Communications is adopting new measures in this direction.

In conclusion I would like to mention a factor that is one of the most important ones for the Post Office and PNS sector: utilization of the workers' abilities and initiative, the upgrading of their skills, the improvement of managerial work, and the stabilization of personnel.

The basic personnel problem is the high turnover, and a certain decline in the quality of the personnel associated with the high turnover rate. The causes are known, they have been explored also in surveys, and we will not dwell on them here. Solutions likewise have been proposed. It is now necessary to choose suitable measures and to implement them consistently and purposefully. This is the present task of the Federal Ministry of Communications and of both URS's. Which does not mean that communications organizations should wait with the solution of their personnel problems. The exact opposite is true. At the same time the most urgent is the area of postal transportation where the situation, in terms of turnover, age structure and the structure of skills, is simply intolerable.

A further task is to upgrade the quality of managers in the Post Office and PNS and thereby to improve management. This task will likewise lead to specific outputs, i.e., measures.

It is necessary to increase the number of workers with technical training (mechanical engineering, electrical engineering), including workers in top posts. I regard as intolerable the situation at the operations laboratories where--for example at the communications directorates in Central Bohemia, South Bohemia, North Nohemia, East Bohemia, West Slovakia and East Slovakia Krajs--there is not one staff member specializing in problems of the Post Office and PNS. At the same time there is an entire series of timely tasks, and their number at these large organizations will increase further. If the appropriate top officials still fail to recognize this fact, it will be necessary to resort to directive measures. In the same manner it will be necessary to beef up the technical development departments, and to separate the problems of territorial planning and investment preparation from the other problems.

Important and timely is also a reassessment (analysis) of the present system of education and further training within the Post Office and PNS sector. On the basis of negotiations among the Federal Ministry of Communications, UIS [Central Information Service] and the Communications Research Institute in Prague, the present situation will be evaluated and, in the next step and in context with the system of adult education that is being planned, a suitable system will be proposed that will utilize also the information gained abroad (from the literature and study tours). The primary objective is a complete system of education and training for workers changing over to new equipment, the upgrading of skills, and the training of managerial personnel. It is evident that the elements of such a system will have to be introduced gradually, and that introduction will be a long-term process.

Close attention will be devoted also to the application and utilization of the results of social surveys and ergonomic studies within the Post Office and PNS. Additional studies will focus on postal transportation and sorting, public relations, and self-service (user and operational aspects).

1014
CSO: 5500/3011

PHONE COMPANY OPERATIONAL IMPROVEMENTS PRAISED

Bridgetown ADVOCATE-NEWS in English 28 May 82 p 2

[Text] A new Digital Multiple and Traffic Operator Position system was officially opened at the Telephone Company last Tuesday, by Information Minister Senator Nigel Barrow who lauded the company for its response to large and sophisticated demands.

Senator Barrow who spoke at a function held later at the Barbados Hilton, said that examples of the company's response to such demands included the work done for the visit to Barbados last month of the American President Ronald Reagan.

He said also that it gave him great satisfaction that it was now possible to dial from Barbados directly to any part of the world.

He pointed out that Government had recently approved a new rate structure recommended by Cable and Wireless for International Direct Dialling, and that one of the immediate benefits of the new structure was that by using the International Direct Dialling System, calls will be at a cheaper rate than calls placed through an operator.

In addition, the Minister said that use of the reduced rate of the period 11 p.m. to 7 a.m. daily and all day on Sunday. will make it even cheaper for Barbadians to make calls overseas.

The Information Minister said that according to his understanding, subscribers served by the Grazettes Exchange will in a short time enjoy the facilities of International Direct Dialling and the system will then be available throughout the island.

He also said Government now controlled some 573 133 shares in the company, which according to Senator Barrow reflected the administration's "recognition of the vital role played by this system in the growth of a developing country such as ours."

He also touched on the role of the telephone which he pointed out had been instrumental in transforming the world into a global unit, linked by a net work of signals and voices, giving countries neighbours at the other end of the earth.

Said Senator Barrow: "The need to communicate has always been fundamental to social intercourse, rational development and technological advancement."

"The telephone, since its inception, has been at the heart of every major event that has occurred, crossing political frontiers and easing tensions created by cultural differences," the Minister added.

He queried what other medium was a "hot line" instrumental in cooling situations.

The function was attended by a number of top officials from the company.

CSO: 5400/7545

BRIEFS

SHIP-TO-SHORE RADIO--The local fishing industry has been given another boost in the area of emergency services with the provision of advanced radio communications to the Government's Fisheries Division. The division has been equipped by Government with a Very High Frequency (VHF) ship-to-shore Regency Polaris radio and has also received three mobile two-way radios from the Central Emergency Relief Organisation (CERO). The equipment is part of the steps Government is taking to reduce the possible damage and dislocation to the fishing industry through a hurricane. Fisheries will use the VHF radio to monitor fishing boat radio activity, assist the Coast Guard in locating missing boats and enable the division's mechanics to talk to fishermen and provide advice on emergency repair of engines and equipment while at sea. The mobile radios will be used for communication between the Fisheries Office and tractors or other vehicles used to provide emergency hauling-up services. [Text] [Bridgetown SUNDAY SUN in English 30 May 82 p 1]

CSO: 5500/7545

PLANS FOR GIANT C & W ANTENNA DISH MOVING AHEAD

Hamilton THE ROYAL GAZETTE in English 31 May 82 p 2

[Text] Plans for the giant Cable and Wireless satellite dish in Devonshire are set to be submitted for final approval within the next few months.

Structural details on the 90 feet high dish are now being completed by the Japanese manufacturers Mitsubishi and are expected to arrive in Bermuda "very shortly".

Mr. John Fuge, company engineering manager, said: "Things should be starting to happen very soon. We have an awful lot of things to get through in the next three months including final planning permission, of course. But we have a deadline from our point of view, in order to meet the growing traffic demands."

The $18 million project along a protected Devonshire ridgeline includes a major building scheme as well as the erection of the 97-foot diameter dish. The Cable and Wireless target date for completion is in 1984 when existing submarine cables will be reaching the end of their working lives.

"This is a major building project. The dish is not the only thing," said Mr. Fuge. "There is a new power house that has to go up to provide generators, a new technical building both of which ahve to be linked into this project. Some of the building should be finished by Christmas."

Cable and Wireless is anxious to speed the project through not only because the existing submarine cable "will be on borrowed time in 1984-85" but also because its capacity is now full. "The number of channels required through Bermuda is going up all the time," said Mr. Fuge.

"Bermuda is a transit point for traffic coming up from the Caribbean. The capacity of the direct cable from Bermuda to the United States is full and we are having to use spare capacity in the cable going to Canada to route traffic to the U.S."

Mr. Fuge said that the company is concerned over environmental complaints about the giant dish, which will be visible from North Shore to Kilderry Estate and St. Brendan's Hospital.

"We have done everything we can at the lower level to prevent people getting a great eyeful as they drive along Middle Road. There is a certain amount of planting on the site.

"But you have to remember that this dish stands 90 feet high and having trees on an antenna farm is completely alien because they would absorb the signals they are trying to receive.

"We intend to keep talking to the National Trust on all these things. We would be foolish not to because they can offer a lot of assistance and very valuable advice."

CSO: 5500/7546

NEW CULTURAL, EDUCATIONAL RADIO STATION INAUGURATED

San Jose LA NACION in Spanish 25 Apr 82 p 6-A

[Article by Enoc Hernandez]

[Text] Turrialba--The Turrialba Cultural Broadcasting Station went into operation yesterday with broadcasts of a variety of music and some educational programs. The inauguration was held at the Turrialba city hall where the station is located. Prince Philip von Liechtenstein presided at the ceremonies.

He came especially for this ceremony from Liechtenstein, a country of 157 square kilomters located in Central Europe between Austria and Switzerland.

He is interested because he is president of the Institute for the Development of Adult Education in America, an organization which finances the Costa Rican Institute for Educational Radio [ICER]. This body plans to sponsor a total of 28 cultural broadcasting stations, one of which is that of Turrialba.

Among those present, in addition to the prince, were Harry Wohlstein, minister of Public Security, as President Carazo's representative; Jorge Rivera, the mayor of the municipality; and Rodolfo Salas, president of the local council.

Wohlstein expressed his gratification with regard to the establishment of these cultural broadcasting stations which he felt is a means of blocking the signals from foreign broadcasting stations which advocate ideas contrary to our democracy.

He said that in May the frequencies of all Costa Rican broadcasting stations will be changed, and the establishment of other stations will be encouraged, in order to cover the entire dial.

Radio Talamanca is now broadcasting in the Bribri language under the ICER program and the operation of a similar station in Nicoya will begin soon.

The station which was inaugurated yesterday in Turrialba cost $30,000 and is managed by a local administrative committee over which the present mayor of Turrialba presides.

This group is planning agricultural development programs. It is coordinating this endeavor with officials of the Tropical Agronomy Center for Research and Training and the Atlantic University Center. It is also supported by the Turrialba Lyric Company, since one of its members, Alvaro Carpio, was one of the station's sponsors. The station operates on a frequency of 1600 khz for Turrialba.

9204
CSO: 5500/2250

BRIEFS

CUBAN-MEXICAN TELEPHONE LINE--Havana, (AIN)--Friday at 1400 hours, in a conversation with Mexican President Jose Lopez Portillo, our Commander in Chief Fidel Castro inaugurated a direct telephone connection by satellite between the two countries. In his conversation with Lopez Portillo, Fidel Castro, after warmly greeting him, reiterated the support of the Government and people of Cuba for the work being done by the Mexican president. He wished him health and success in his work. Fidel pointed out that the new telephone line strengthens even more the bonds of friendship and brotherhood between the Cuban and Mexican people. As to Lopez Portillo, he sent warm greetings from the Mexican people to the Cuban people and especially to Fidel Castro. Among those who attended the ceremony were Guillermo Garcia, member of the Politburo, vice president of the Council of State and minister of transportation; Jesus Montane, alternate member of the Politburo and member of the Central Committee Secretariat; and Pedro Guelmes, Central Committee member and minister of communications. Also present at the inauguration were Fernando de Garay, Mexican under secretary of transportation and communications; Perez Correa, director general of Mexican Telecommunications; and Mexican Ambassador to Cuba Rodolfo Echeverria Ruiz. With the inauguration of this line, there are now open five telephone canals, a telephone support canal for 46 telegraph canals via satellite and there is an immédiate prospect of increasing this to 10 telephone canals. [Text] [Havana GRANMA in Spanish 3 May 82 p 1] 9204

CSO: 5500/2249

COMMUNICATIONS CONTRACT TO BE APPROVED

PY190140 Asuncion HOY in Spanish 18 May 82 p 12

[Excerpt] The Public Works and Communications Commission of the Chamber of Deputies this week will approve the bill which ratifies the agreements that were entered into between the national government and the Algemene Bank Nederland of the Netherlands for the supply, setting up and financing of the equipment for the communications system for the Chaco region. This will be made through the Philips Communicatie Corporation.

The financing of the works will be done through two loans. The first loan covers 20 percent of the value of the contract and it will be refunded in 10 consecutive and equal installments which will be amortized every 6 months with 2 and 1/2 years of grace. The interest rate will be of 12 percent per year with a commission of 0.5 percent and a set commission of 3/8 [percent].

The second loan will cover 80 percent of the value of the contract and it will be refunded in 16 consecutive and equal installments, which will be amortized every 6 months. This loan will have 2 and 1/2 years of grace and the interest rate will be of 12 percent. The mentioned loans amount to approximately 50 million Dutch florins.

The contract that was signed with the Philips Corporation last year for the communications system for the Chaco region includes: a microwave link with 960 telephone channels plus a spare channel for television broadcasting and a secondary system with 60 telephone channels.

This is a system for rural and urban telephone communications, and will be connected to the mobile telephone system according to the requirements of the National Telecommunications Administration (ANTELCO). It will also include a mobile telephone system for the city of Asuncion which will have access to the public telephone network.

The contract that was signed with the above-mentioned corporation will be financed with the loan that was extended by the Algemene Bank Nederland of the Netherlands.

Following the approval of the contracts by the public works and communications commission, they must be reviewed and approved by the economy and budget commissions.

CSO: 5500/2284

ARAB COMPUTER FOR SATELLITE COMMUNICATIONS

Kuwait AL-SIYASAH in Arabic 8 May 82 p 7

[Article: "Project for Arabization of Communications Symbols Completed in Preparation for Use of Arab Computer for Satellite Communications"]

[Text] The Arab Organization for Specifications and Standards has completed preparing a plan to Arabize telecommunications symbols in preparation for using a special Arabic computer for satellite communications. The organization has also prepared another project for Arabizing telex communications.

This statement was made by 'Adnan 'Awni, the organization's secretary general. He said, "We have prepared a standard code in Arabic in the form of a standard specification to be used in the special computer for satellite communications between the Arab countries." He indicated that this project assumes special importance as a complementary step to the Arab satellite project.

In a statement to the newspaper, AL-WAHDAH, which came out yesterday in Abu Dhabi Mr 'Awni added, "The code will be presented to the organization's board of directors for final approval at a meeting that is to be held next October. After that western countries that manufacture communications computers will be asked to produce this Arabic computer according to the specifications we arrived at so that it can be made commonly available to all the Arab countries."

Regarding the Arabization of telex communications he said, "The plan will be presented at the next meeting of the organization's board of directors. It is based on the principle of Arabizing the letters used in [sending a] telex. This requires that special equipment be manufactured for that purpose according to standard Arab specifications. That is, implementation of this project will facilitate and universalize use of this means in the Arab countries, and this will increase and strengthen communications between Arab countries."

The Arab Organization for Specifications and Standards was established in 1967 by virtue of an agreement which was signed by Arab countries. The objectives of that organization were to set down standard specifications for Arab products in all areas. So far, specifications for about 500 objects have been drawn up, and work is continuing [on other specifications] in 23 technical committees.

8592
CSO: 5500/4724

BRIEFS

'IRNA' INTERNATIONAL SATELLITE NETWORK--Tehran, 10 June (IRNA)--The first line of the international satellite network of IRNA opened this morning. The line will enable the news agency to send news to its six major branches in various parts of the world simultaneously with Tehran, via London. Direct contacts with news agencies of brother and friendly countries will also become possible. Prior to the victory of the Islamic revolution of Iran, only Western news agencies, attached to the cancerous network of news imperialism, enjoyed such privileges. The opening of the line is the third phase of expanding the overseas activities of IRNA. In the past one and half years, IRNA has established more than 18 branches and the transmitters of the news agency operate over 16 hours a day. At present five overseas bureaus of IRNA put out daily bulletins. [Text] [LD102114 Tehran IRNA in English 2009 GMT 10 Jun 82]

CSO: 5500/2270

EARTH STATION FOR WORLDWIDE COMMUNICATIONS TO BE BUILT

Cotonou EHUZU in French 7 May 82 p 8

[Article by G. Adissoda: "Toward the Construction of an Earth Station at Abomey-Calavi"]

[Text] An agreement regarding the construction project for an international telecommunications earth station at Abomey-Calavi was signed yesterday at the Ministry of Foreign Affairs and Cooperation (MAEC) in Cotonou between the People's Republic of Benin and the French Republic.

This agreement deals with the first segment of financing--300 million CFA francs out of a total cost of approximately 4,150 million CFA francs.

Seventy-five percent of this financing will be handled by the FAC (Aid and Cooperation Fund).

Acting on behalf of the People's Republic of Benin were Comrade Leon Blaise Ahouandogbo, deputy director general of the above-mentioned ministry, and Mr Antoine Foures, head of the Aid and Cooperation Mission on the French side.

This important project will be carried out by TELSPACE. It will help resolve the problem of the proliferation of telephone lines going out of the country, a problem faced by our country at present because of the great increase in telephone traffic in recent years. In addition, the project will permit the People's Republic of Benin to become less dependent in the sub-region in the area of telephone communications.

9927
CSO: 5500/5797

EARTH SATELLITE STATION TO BE BUILT WITH FRENCH AID

Praia VOZ DI POVO in Portuguese 22 May 82 p 1

[Excerpts] "The government of Cape Verde has the highest regard for the policy of France, a country with which ours maintains excellent relations of friendship and cooperation," the minister of transports and communications said at the ceremony held on 17 May in Praia to lay the cornerstone for the first earth station for satellite communications.

In a brief address to the representatives of various national and French government departments, Cmdr Herculano Vieira said that the building of the earth station will allow Cape Verde to make direct contact, via satellite, with a number of countries, in particular Portugal, the United States, Senegal, Angola and France, the country financing the project, which is budgeted at 3 million dollars, according to an authorized source at the CTT [Posts, Telegraph and Telephone] EP.

"The intention is to provide the country with basic communications facilities. And because of this I want to express, on behalf of the government of Cape Verde, our most profound thanks for the aid France has given us," the Cape Verdian minister went on to stress.

The representative of France, in turn, said that the delivery of the materials for the earth station to the Cape Verdian authorities bears witness to the desire of his country to develop cooperation with Cape Verde in a basic developmental sector. He stressed that France assigns great importance to telecommunications among the African nations, with which it has undertaken projects in this field.

The plans for the building of the earth station, budgeted at 3 million dollars, were probably arranged, according to our CTT source, in 1981. The stock of equipment includes, among other things, a telecommunications containment device, broadcasting and receiving equipment and two energy meters. Information provided by the technical office of the CTT indicates that the station will be finished in the middle of August of this year. Engineer Lobo told us that the station will be able to transmit telephone, telegraph and telex communications, and in addition, will have the capability of receiving telecasts. The study calls for two circuits for Senegal, France, Angola and the United States and three for Portugal, according to the same source.

In the opinion of the technical director of the CTT, this station provides a direct outlet for these countries, and he added that he hopes that in the future new ventures will emerge with a view to the development of the communications sector in Cape Verde.

Currently, a training course for earth station operators, lasting 3 months, is in progress at the CTT installations. The course, which is being attended by 10 students, is being offered by French experts, aided by two of our technicians who recently returned from an apprenticeship in France. Two maintenance technicians have just completed training in that country.

5157
CSO: 5500/5833

POSSIBLE RAIN DAMAGE TO AUTOMATIC TELEPHONE EXCHANGE EQUIPMENT

Accra DAILY GRAPHIC in English 4 Jun 82 pp 1, 4

[Article by Nelson Duah]

[Excerpts]

AUTOMATIC telephone exchange equipment worth millions of cedis stands the risk of being damaged because water gets into it whenever it rains. The equipment installed in March 1959 is so delicate that no water should touch it.

The roof of the building housing the equipment at the Cantonments P & T telephone exchange is so seriously leaking that it may cave in at anytime.

When I visited the building yesterday, I found that the floor was covered with water. Mr M. K. Owusu, Secretary of the local Workers' Defence Committee who conducted me round the building showed me tarpaulins used to cover the delicate equipment when it rains.

The battery room which gives power to the exchange when there is electricity failure is also completely waterlogged.

The WDC secretary told me that two weeks ago the workers threatened to leave the place if the machines were not protected from the water.

The WDC Secretary also referred to a new building which will be used to install new automatic telephone exchange equipment and said it is two and half years behind schedule.

He called on the corporation's management to bring pressure to bear on the contractor to finish work before the end of the year.

CSO: 5500/5835

TV VIEWING CHANGES BLACK LIFESTYLES

Johannesburg THE CITIZEN in English 23 Jun 82 p 11

[Text] The lifestyle of Blacks has changed ... only a few months of exposure to TV 2/3, according to a survey by the Marketing and Research Department of Grey-Phillips, Bunton Mundel and Blake.

The department recently talked to 20 men and women separately who own TV sets and found that Black families seemed to have become more closely knit.

Together

"When you come home in the evenings, you know your family is together; the children are indoors, and not in the streets," said one of the Blacks question questioned.

Most people bought television sets for their children's sake, as they felt the biggest advantage of television was its educational effect. Their children's English had improved, and their general knowledge was growing.

Although there were complaints about the effect of TV on children's bedtime and study habits, adults felt they, too, were complementing their education.

Men sometimes used TV as an escape from marital arguments, and women complained that their husbands used TV as an excuse for not taking them out.

Disadvantage

The major disadvantage seemed to be that TV was a conversation-inhibitor--but, on the other hand, a substitute for expensive entertainment.

Everybody seemed to watch some TV everyday, but more selective about programmes. ALthough the news was a daily must, programmes which featured Black music or lifestyles did not appear to be popular.

"They are taking us back--they think we still belong to the old school," was the general comment.

Dubbing of programmes was criticised, as people felt programmes should be shown in the original language, or not at all.

The groups questioned generally agreed that TV2/3 reflected the rural, or homeland Black society, at the expense of the urban Black. "They want to project this whole place as a rural area."

The lack of experience of Black actors and news readers was criticised.

"The screen is showing the green veld in Transkei, while the news-reader is talking about snow in America," remarked one.

Another complaint was that the Black transmission did not end daily programmes with "Nkose Sikeleli Afrika" or "Morena Boloka," in the same way as TV1 closed with "The Voice."

The groups also commented on lifestyle inaccuracies in advertisements. For example, children are not served food or drink in chinaware. THEY use plastic or metal plates and cups, while china was used for adults.

It became evident that only a high standard of professionalism would satisfy Black audiences.

CSO: 5500/5844

PRIME MINISTER: CABLE TV LAW SHOULD PREVENT MONOPOLIES

Helsinki UUSI SUOMI in Finnish 20 May 82 p 3

[Article: "Sorsa Wants Domestic Programs, Cable TV Should Not Be Monopolized"]

[Text] In the opinion of Prime Minister Kalevi Sorsa there is a need to place paticular emphasis on the domestic level of programming in cable television legislation. In submitting legislation on cable television to the parliament in the near future there is no reason to organize this new media just for the transmission of foreign tv entertainment, stated Sorsa at a meeting of the League of Newspapers on Wednesday.

According to Sorsa the government does not have any intentions of monopolizing cable television and of permitting it to be monopolized. Area wide and economic equality must also be kept in mind, stated Sorsa.

Sorsa sees the rapid development of technology as the strongest development trait in the Finnish media in the last and present decades. "When one looks at recent developments in techonology, one would think that the engineers and business leaders have reached their apex in this respect," states Sorsa.

'Editors Need More Knowledge of Society'

Even personnel working in editorial departments need more training according to Sorsa. The need for training is also demonstrated by the numbers alone. Approximately 150 new newspaper editors are needed annually, but approximately only 50 are trained each year, he noted.

"Mere communications training is not always sufficient, but there is also a need for editorial personnel who have a comprehensive knowledge of society and the world," stated Sorsa.

This spring there has been an exceptional degree of discussion on relations between the press and political decisonmakers. Their interests are not, of course, always identical, but there is a need for a better of understanding of one another, considered Sorsa.

"This could be promoted if thepolitical decisionmankers as well as editors would try to look at issues as issues and would not be so quick to doubt the other's motives. An evaluation of motives is, in general, a rather uncertain occupation even if it is as entertaining as speculating over drinks," stated Sorsa.

10576
CSO: 5500/2244

BRIEFS

STATE RADIO PARTICIPATING IN EURICON--The state-owned Finnish Broadcasting Corporation is the only Nordic tv corporation participating in the satellite experiment beginning on Tuesday in the area of the European Public Radio League. Fifteen EBU-member companies from Europe and North Africa will participate in the Euricon project, which will last until the end of the year. The general public will not see Euricon transmissions at least initially, they have been reserved for mutual experiments to be conducted by the public radio corporations. The purpose is to study the quality of satellite pictures and simultaneous digital voice transmissions in several different languages. The Finnish Broadcasting Corporation itself will not be able to receive Euricon transmissions since the corporation does not have the necessary antenna costing approximately 200,000 markkas, but it will receive a satellite picture during the test period through a link-up from the State Technical Research Institute's "receiving disc" on the roof of the water tower in Pasila. Euricon transmissions will be broadcast for 5 hours a day. The programming is made up of productions from the various public radio corporations. Primarily because of unresolved problems concerning copyrights, the public radio corporations of the other Nordic countries are not participating in the experiment. On the contrary, the Finnish Broadcasting Corporation was able to negotiate an agreement, according to which it does not have to submit any of its own programming for the experimental transmissions. The transmission of the programs will be conducted via a satellite owned by IBA OTS, a joint organ of British commercial tv companies. This same satellite is also being used for broadcasts by British Satellite Television Ltd., whose programming is being received by Helsinki Television. Helsinki Television cannot, however, particpate in the Euricon experiment as an outside corporation of EBU and according to network chief Lennart Wasstrom it would not want to participate since it is conducting its own experiment with the Postal and Telegraph Administration. [Text] [Helsinki HELSINGIN SANOMAT in Finnish 26 May 82 p 11] 10576

SWEDEN TO JOIN EURONET/DIANE IN SUMMER

Stockholm NY TEKNIK in Swedish 22 Apr 82 p 2

[Article by Hans Werner]

[Text] This summer the Swedish Telecommunications network will be connected to the European data communications network called Euronet/Diane. The connection actually will be made in England.

Euronet is a data communications network that includes the EC countries. A large number of information services are included under the name Diane (Direct Information Access Network for Europe).

Euronet/Diane began operating in the spring of 1980. After long negotiations, agreement was reached in the fall of 1980 to connect Sweden to the system. On 18 December last year an agreement was signed between the Swedish government and the EC in Brussels.

The technical connection agreed on by the Swedish Telecommunications Service and the telecommunications authorities of the EC countries will occur this summer. At that time, it will become possible for Swedish users to conduct literature searches, for example, in data bases connected to Euronet/Diane.

A total of about 300 data bases are connected to the system. They are located at 36 data centers throughout Western Europe. The largest data center connected to Euronet belongs to the European Space Administration (ESA). It is located in Rome.

When Sweden becomes connected to the system, information stored in Sweden will become available to the EC countries. This will occur by way of the Telecommunications Service's equivalent of Euronet--Telepak.

Faster Deliveries

When the agreement with the EC was signed in Brussels on 15 March Harry Brynielsson, director of the Swedish Delegation for Scientific and Technical Information (DFI), said he would like to see closer cooperation on document deliveries, among other things.

A long-standing problem has been that a document can be located rapidly, but it may take a long time to produce it in some physical form. Now a number of systems are being developed for the transmission of entire documents.

Another important achievement is that, for example, users of the medical information center in Sweden (at the Karolinska Institute) eventually will be able to reserve and/or order a book or other document automatically after it has been located. This will eliminate a troublesome bottleneck in the flow of new specialized information.

9336
CSO: 5500/2258

BRITISH SEND UNAMPLIFIED SIGNAL 102 KM OVER OPTICAL FIBER

Sundbyberg MODERN ELEKTRONIK in Swedish 1 Apr 82 p 11

[Text] At British Telecom's research laboratory in Martlesham Heath, 140 Mbit/s signals have been transmitted successfully over a 102-km single-mode optical fiber. This is the longest transmission ever achieved at this pulse velocity without intermediate amplification.

The optical connections now built by British Telecom for long-distance calls require amplifiers at about 8-km intervals, while conventional coaxial cables require amplification every 2 km. The successful experiment conducted at the Martlesham laboratories may make it possible to use optical transmission systems to bridge distances of 30 km or more without repeater stations.

The single-mode fiber used in the experiment has a core with an extremely small diameter so that the light-carrying central region has room for only one type of light path.

This reduces to a great extent the dispersion in the fiber--from about 1 ns/km for a multi-mode fiber of the "graded index" type to as little as 10 to 100 ps for 30 km of a single-mode fiber.

Additional advantages have been gained from the transition to a longer wavelength (deeper into the infrared) which has reduced losses. At a wavelength of 1,300 nm single-mode fibers have an attenuation of about 0.4 to 0.5 dB/km and it drops to 0.25 to 0.35 dB/km at a wavelength of 1,500 nm, the wavelength used in the experiment. The losses over the 102 km connection containing 11 splices were measured at 3 dB--an extremely low value. All the fibers were manufactured at Martlesham.

The dispersion caused by irregularities in the material was kept within acceptable limits by using transmitters with a sharply reduced spectral width. This is accomplished by "injection locking" with two lasers. At the receiving end of the fiber, receivers were used that were especially sensitive to the wavelength, 1,500 nm, used here. They used PIN detectors manufactured of GaInAs material with GaAs FET amplifiers in a hybrid circuit which also was designed and produced at Martlesham.

9336
CSO: 5500/2258

END

JPRS 81280

14 July 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 227

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 81280

14 July 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 227

CONTENTS

WORLDWIDE AFFAIRS

USSR, Guinea Sign Radio, TV Agreement
(Conakry Domestic Service, 19 Jun 82) 1

Briefs
Soviet-Iranian Agreement Anniversary 2
Soviet-Lebanese TV Agreement 2

ASIA

INDIA

INSAT-1A To Begin Despite Problems
(THE HINDU, 17 Jun 82) 3

INDONESIA

Briefs
New Earth Stations 5
New Palapa Satellites 5
Earth Stations 5

JAPAN

Briefs
Rockets for Satellite Launches 6

LAOS

Briefs
Intersputnik Telephone Service Begins 7

PAKISTAN

Briefs
Gujranwala Exchange Capacity Raised 8
No Sialkot-Faisalabad Line 8
Lahore-Amritsar Cable Link 8
Nazimabad II Exchange Opened 8

PEOPLES REPUBLIC OF CHINA

Sichuan Develops Two More Telecommunications Devices
(Wei Guozhen; DIANXIN JISHU, No 2, 1982)................. 10

Briefs
Xinjiang Begins Kirgiz Broadcasts 12
Heilongjiang: Microwave-Circuit Long-Distance Dialing Service 12
New Ningxia Television Center 12

THAILAND

Briefs
New Radio Stations 13

VIETNAM

Buon Ma Thuot-Mo Drac Telephone Line Completed
(NHAN DAN, 6 Jun 82).................................... 14

EAST EUROPE

POLAND

Politburo Discusses Information Policy 18 June
(TRYBUNA LUDU, 19-20 Jun 82)............................ 15

Statement to UN Protests Western Media Activities
(PAP, 26 Jun 82).. 16

YUGOSLAVIA

Radio Stations Ordered To Cut Power
(TANJUG Domestic Service, 24 Jun 82).................... 17

LATIN AMERICA

INTER-AMERICAN AFFAIRS

Briefs
Direct Dialing Established 18

BRAZIL

Nation Will Own Telecommunications Satellites in 1985 (LATIN, 1 Jul 82).. 19

Briefs
Loan for Satellites 20

CUBA

Station Notes Debate Over Radio Marti Antennas (Havana International Service, 18 Jun 82).............. 21

MEXICO

President Inaugurates Satellite Network (Mexico City International Service, 23 Jun 82).......... 22

NEAR EAST AND NORTH AFRICA

AFGHANISTAN

Ministry of Communications Renewing, Expanding Facilities (KABUL NEW TIMES, 15 Jun 82)............................ 23

IRAN

Briefs
Telephone Centers in Esfahan Province 25
New Facilities Near Marand 25
Telephone Center in Esfarayen 25

ISRAEL

Briefs
Foreign Satellite Use Restricted 26

UNITED ARAB EMIRATES

'WAM' Report on Agency's Structure, Activities (Editorial Report).. 27

SUB-SAHARAN AFRICA

LESOTHO

Briefs
UNESCO To Discuss News Agency 28
Commercial Radio Station 28

SOUTH AFRICA

Professor Reports on Computer Conference in USSR (THE STAR, 3 Jun 82).. 29

WEST EUROPE

INTERNATIONAL AFFAIRS

Briefs
Maltese-European Radio Plans 30

FINLAND

Revolution in Telecommunications Increases Need for New Law (Torsten Ekman; HUFVUDSTADSBLADET, 27 May 82)........... 31

Tampere Phone Center Is First in Country With New 'Axe' Unit (HUFVUDSTADSBLADET, 27 May 82)........................... 36

FRANCE

Ministry Plans Data Processing Financing, Restructuring (Daniel Lacotte, Eric le Boucher; L'USINE NOUVELLE, 29 Apr 82)... 38

NORWAY

Briefs
Nordsat Studies Funds 43

USSR, GUINEA SIGN RADIO, TV AGREEMENT

AB200811 Conakry Domestic Service in French 1245 GMT 19 Jun 82

[Text] An agreement was signed yesterday afternoon between representatives of Soviet radio and television and their Guinean counterparts. The ceremony was held at the People's Palace in Conakry. On the Soviet side was His Excellency Comrade Vladimir Kitayev, the Soviet ambassador to Guinea. With him were members of the Soviet delegation, including the chief editor of the Soviet Broadcasting Corporation and the head of the Department of International Relations of Soviet Radio and Television.

The Guinean delegation was composed of Comrades Dansuman Bangoura, permanent under secretary at the Office of Information; Emmanuel Kati, permanent secretary for information; Adia Tousso, director of programs at the television service; Bambou Kaba, director of programs at the broadcasting station; Sidiki Toure, director of the Office of Research; and Bemandine Gasonnet, deputy director of programs at the broadcasting station.

Comrade Dansuman Bangoura, permanent under secretary at the Office of Information, took the opportunity to thank all those officials--Soviet and Guinean--who worked toward the successful conclusion of the talks. This demonstrates a political desire and a common ideological stand, in the spirit of proletarian internationalism, for the well-being of the people and peace, he concluded.

USSR Ambassador to Guinea His Excellency Comrade Vladimir Kitayev thanked the Guinean side for the very warm and friendly welcome given to his delegation. He also expressed the desire to do everything possible to implement this agreement. As for the representative of the Soviet state committee and the leader of the cooperation delegation, he sincerely thanked both sides for the total success of the meeting, which constitutes a strong basis for cooperation between Soviet and Guinean broadcasting and television. Finally, he expressed the hope that the work just completed will open a new road in bilateral relations and enable the achievement of all our other objectives. After the signing of the final document, the two delegations paid a courtesy call on Comrade Sekou, a member of the Central Committee and general commissioner for information, and his closest aides. Once again, this was an opportunity to recall the good relations existing between our two countries--the Soviet Union and the People's Revolutionary Republic of Guinea--which are wisely led by Comrades Leonid Brezhnev and Ahmed Sekou Toure, two great leaders whose reputations have transcended the boundaries of their own countries and are well known throughout the world.

CSO: 5500/2268

BRIEFS

SOVIET-IRANIAN AGREEMENT ANNIVERSARY--Today marks the 10th anniversary of the signing of the Soviet-Iranian agreement in 1972 on the expansion of telephone and telegraph links between the two countries. Within the framework of implementing this agreement, Soviet organizations laid a telephone and telegraph line from Soviet to Iranian territory between Astara, the Soviet Union, to Astara, Iran. Prior to this, the necessary studies were carried out, the relative plans drawn up and the necessary installations and material delivered. In implementing Iran's request, Soviet organizations are extending technical assistance for repairs on part of this telephone and telegraph line on Iranian territory. The 10 years that have passed since the signing of this agreement have shown that this agreement helps consolidate good-neighborly relations based on the principles of equality, nonintervention in domestic affairs and full respect for the two countries' national sovereignty. [Text] [NC101414 Moscow Radio in Persian to Iran 1100 GMT 10 Jun 82]

SOVIET-LEBANESE TV AGREEMENT--The protocol on cooperation between the USSR State Committee for Television and Radio Broadcasting and the Lebanese Television Company for 1982-84 was signed in Moscow today. After the signing ceremony, Lebanese Information Minister Michel Iddih said: Cooperation with the Soviet Union in the field of television enables the Lebanese people to get better acquainted with the achievements of the peoples of your country in the economic, scientific and cultural fields, with the way of life of Soviet people. I hope that the document signed today will contribute to further expansion of this cooperation. [From Vremya newscast] [Excerpt] [LD042026 Moscow Domestic Television Service in Russian 1700 GMT 4 Jun 82]

CSO: 5500/2268

INSAT-1A TO BEGIN DESPITE PROBLEMS

BK281527 Madras THE HINDU in English 17 Jun 82 p 9

[Excerpts] Bangalore, 16 Jun--"The performance checkout of the Indian National Satellite (INSAT-1A) has been completed and the multi-purpose satellite is now available for utilisation on a quasi-operational basis", the Indian Space Research Organisation (ISRO) said in a press release here today.

The operational plan was being adjusted to accommodate the constraints due to the non-deployment of its solar sail. With the sail in non-deployed condition the onboard fuel is expected to sustain the spacecraft operations for 2.5 years against the originally expected life span of about 7 years.

Regular television operations through the satellite would begin as scheduled from August 15 and the radio stations in Hyderabad and Ahmedabad had already been brought under INSAT radio networking.

ISRO said pending further studies and simulations, efforts to deploy the solar sail had been held in abeyance. The non-deployment of the sail would result in additional consumption of fuel for spacecraft attitude maintenance as well as certain thermal constraints. These would primarily affect the S-band TV/radio transponder operations and to some extent the very high resolution radiometer (VHRR) intended for meteorological utilisation.

Certain anomalies noticed in the performance and operation of telecom transponder and VHRR infrared defectors were under investigation, ISRO said.

All efforts were being made for the earliest possible restoration of the planned full service capabilities of the INSAT system, especially the continuous operation of the high power S-band transponders.

The initial Telecon,,VHRR utilisation for weather monitoring and the radio networking operations are expected to be stabilised in the second half of this month and the television utilisation is to begin in mid-August.

Further orbit trimming was now underway and these operations were expected to be completed shortly to match the needs of the post and telegraphs earth stations.

Performance satisfactory: According to ISRO, 27 of the 28 fixed earth stations of the P and T were ready. Three main stations and even remote area stations had completed test access with the satellite. The performance of the earth stations had been generally satisfactory.

CSO: 5500/2282

BRIEFS

NEW EARTH STATIONS--Jayapura, 29 May (ANTARA)--Five new small earth stations (SBK) will shortly be opened by Minister of Communications Rusmin Nurjadin in Irian Jaya. The chief of the 12th telecommunication district (Irian Jaya), Surachman, told ANTARA were Friday [28 May] the new stations are in Sarmi (Jayapura Regency), Serui (Yapen Waropen Regency), Kaimana (Sorong Regency), Tanah Merah (Merauke Regency) and Nabire. Each small earth station is also provided with one television line to bring the local population near the earth stations within television reach. Irian Jaya now has five medium earth stations (SBS) located in Biak, Sorong, Manokwari, Fakfak and Merauke, and one big earth station (SBB) in Jayapura, the provincial capital. [Excerpt] [BK031225 Jakarta ANTARA in English 0748 GMT 29 May 82]

NEW PALAPA SATELLITES--Jakarta, 12 Jun (AFP)--Two new Indonesian "Palapa" satellites will be put into orbit successively starting next year by the U.S. Challenger space shuttle, the Indonesian telecommunications state corporation "Perumtel" said today. A Perumtel spokesman said the U.S. National Aeronautics and Space Agency (NASA) had confirmed the planned launching of the satellites, due to replace two currently in operation, in a letter to the Indonesian Government. NASA will take all necessary steps to ensure a successful completion of the project, the Perumtel spokesman said. [Text] [BK121325 Hong Kong AFP in English 0824 GMT 12 Jun 82]

EARTH STATIONS--The minister of communications, Rusmin Nuryadin, today symbolically launched seven small-sized earth stations in Ranai, Riau Province. The stations are each located at Ranai, Bagansiapi Api, Singkep, Tanjungbatu, Bengkalis, Rengat and Temsilahan. With the launching of the earth stations, telephone conversations can now be conducted 24 hours from those places to all parts of the country by way of the domestic satellite system. [BK251419 Jakarta Domestic Service in Indonesian 1200 GMT 22 Jun 82]

CSO: 5500/2282

BRIEFS

ROCKETS FOR SATELLITE LAUNCHES--Tokyo, June 3 (KYODO)--The Science and Technology Agency and the National Space Development Agency will jointly develop a large-sized rocket capable of launching 1-ton geostationary satellites by around 1990, sources at the agencies said Thursday. The plan for the rocket's development, including choice of design, is expected to be finalized early next week, according to the sources. The Development Agency is now working on another rocket known as the "H1A," capable of launching a 550-kilogram geostationary satellite. The first H1A is scheduled to be launched in 1987. However, the Nippon Telegraph and Telephone Public Corporation earlier this year made public its plan to launch a 1-ton geostationary satellite around 1988 or 1989 and a 4-ton geostationary satellite in the period 1985-1994, both with the use of the U.S. space shuttle. In response to the corporation's plan, the two agencies decided to develop the large-sized rocket to protect their position in space development, the sources said. [Text] [OW031203 Tokyo KYODO in English 1130 GMT 3 Jun 82]

CSO: 5500/2268

BRIEFS

INTERSPUTNIK TELEPHONE SERVICE BEGINS--Hanoi, 24 Jun (VNA)--The Lao Ministry of Posts and Telecommunications has commissioned a telephone service with Vietnam, the Soviet Union, the German Democratic Republic, Hungary, Bulgaria, Poland, Romania and Czechoslovakia via the Intersputnik Space Communication System. The service is available daily from 12:00 to 17:00 hours local time. Laos' satellite ground station which is part of the Intersputnik system also operates a television channel from Moscow from 17:00 to 23:00 hours. [Text] [OW240801 Hanoi VNA in English 0729 GMT 24 Jun 82]

CSO: 5500/2282

BRIEFS

GUJRANWALA EXCHANGE CAPACITY RAISED--gujranwala, June 15--Sayeed Ullah Alvi, General Manager Central Telecommunication said that the capacity of Model Town Telephone Exchange here has been extended from 2000 lines to 2,6000 lines bringing the total capacity of telephone lines in Gujranwala to 7,100. Inaugurating the 600 new lines added to the Model Town Exchange, Mr Alvi said that with the additional capacity available, demand notes had already been issued. He said that efforts were on to provide 800 new connections upto December, over and above the 500 new connections sanctioned during the current year. Telex connections had been installed and no application from Gujranwala was pending with department. The inauguration ceremony was attended by Maulvi Mohammad Anwar, President of Gujranwala Chamber of Commerce and Industry, Haji Manzoor Husain former President of the Chamber, Haji Murad Ali, Malik Mohammad Rafiq, Haji Mohammad Aslam Butt, Mayor, Gujranwala Municipal Corporation and elite of the city. [Text] [Karachi DAWN in English 16 Jun 82 p 41

NO SIALKOT-FAISALABAD LINE--SIALKOT, June 15--The telephone link between Sialkot and Faisalabad remains cut off for the last over one year. The business circles and the private subscribers were extremely upset over this difficulty as both these industrial centres have close connections in trade matters especially textile products and gloves which earn a lot of foreign exchange for the country. The Telephone Department when contacted said that there was some technical hitch which had caused the prolonged deadlock. [Text] [Karachi DAWN in English 16 Jun 82 p 4]

LAHORE-AMRITSAR CABLE LINK--ISLAMABAD, June 16--A wide band coaxial cable which has been planned to link Lahore with Amritsar in India is likely to be operational during 1983, it was officially learnt here today. The cost of the work in the Indian territory will be borne by the Indian administration and in Pakistan by the federal government. The development of communications between the two countries was part of the Asian Tele Communications network. The network programmes are aimed at establishing contacts across the borders in Asian countries which cost less than that of satellite. The new cable link will have the capacity of a television channel and 1200 telephone lines. [Text] [Karachi DAWN in English 17 Jun 82 p 4]

NAZIMABAD II EXCHANGE OPENED--Nazimabad II telephone exchange, built at a cost of Rs. 100 million with 10,000 lines capacity, was opened on Wednesday afternoon. The inaugural ceremony was performed by Mr Fazal-ur-Rahman, Installer of the Telephone Industries of Pakistan a 17-grade employee, in recognition of his outstanding services to the Department. The Exchange, according to the General Manager, Mr. S. Irshad Hasan, has facilities to expand another 10,000 lines exchange and is in the forward planning stage. Nazimabad I Exchange numbers begin with '61' and Nazimabad II numbers begin with '62'. Till yesterday 1,000 demand notes were issued to the persons who had applied up to 1971-72 and earlier. There is a demand of 18,000 telephones in the area. But at present only 9,000 will be given connections including Government connections, shifting cases, priorities including Rs. 20,000 self-financing scheme and normal applications. Those who have applied for telephone from this region up to 1976 will be given connections and those beyond that year, would still be on the waiting list. Mr Irshad Hassan announced that a 10 per cent bonus would be given to the employees if the revenue exceeds Rs. 15 million. During 1980-81, the revenue was Rs. 12 million. He said, during the next fiscal year, 32,000 new telephone connections would be given in Karachi under the present plans, out of the 50,000 telephones to be provided throughout the country. [Text] [Karachi DAWN in English 17 Jun 82 p 8]

CSO: 5500/5841

SICHUAN DEVELOPS TWO MORE TELECOMMUNICATIONS DEVICES

Beijing DIANXIN JISHU [TELECOMMUNICATIONS TECHNOLOGY] in Chinese No 2, 1982 p 48

[Article by Wei Guozhen [7614 0948 2823]: "Sichuan Provincial Post and Telecommunications Science Research Institute Again Successfully Develops Two New Devices"]

[Text] After having successfully developed the overhead exposed line ZMG 302 model high-voltage 12-channel carrier-wave facility (with a frequency band of 156-280 kilohertz), the Sichuan Provincial Post and Telecommunications Science Research Institute has developed two new devices which expand the potential of the overhead exposed line carrier-wave facility with the aim [of overcoming] the insufficient telecommunications capacity in the province and the present inability to carry out large-scale capital construction in telecommunications.

One device is the ZMC 401 type exposed line for super 24-channel carrier-wave telephone equipment (frequency band of 298 to 530 kilohertz). It adds an additional 24 carrier-wave circuits onto the pairs of lines of the newly added high-voltage 12-channel carrier-wave circuits. This means that there are 3 + 12 + higher 12 + super 24 = 51 carrier-wave circuits on one pair of overhead exposed lines.

The other device is the ZMG 303-type new high-voltage 12-channel carrier-wave equipment (frequency band, 228 to 350 kilohertz). It can be added onto four cross-indexed pairs of lines, and it supplements the ZMG 302 type device (or the ZZD-04 type device), which cannot be added to the above pairs of lines. When used jointly, the ZMG 303 device and the ZMG 302 device can add high-voltage 12-channel carrier-wave equipment onto most of the line positions of the new eight-type overhead crosslines (except for the 6th line position and the 10th line position of the new 8A type, because the degree of prevention of crosstalk is lower).

The above-mentioned two devices have already been installed on a 250-kilometer overhead exposed line with an intermediate amplifier and have been tested for more than a year. The performance has been good. The electrical quality of the telecommunications line reached the requirements of the current carrier-wave circuits. The amplification distance is the same as that of the currently used 12-channel carrier wave, and it can satisfy the distance requirements for telecommunications in the province. The original 12-channel and high-voltage 12-channel carrier-wave circuits are not affected.

9296
CSO: 4008/148

BRIEFS

XINJIANG BEGINS KIRGIZ BROADCASTS--Urumqi, 28 Jun (XINHUA)—The radio station of the Xinjiang Uygur Autonomous Region, today began regular broadcasts in the minority language of Kirgiz. This brings to five the number of languages used on the radio in this region which has 13 nationalities. The Kirgiz nationality has a population of about 110,000 making up one percent of the region's total. They mainly live in the mountainous Kizilsu Kirgiz Autonomous Prefecture in the western part of Xinjiang. The Xinjiang people's broadcasting station now transmits programs in Uygur, Han, Kazak, Mongolian and Kirgiz. That is, more languages than in any other part of China. [Text] [OW281258 Beijing XINHUA in English 1216 GMT 28 Jun 82]

HEILONGJIANG: MICROWAVE-CIRCUIT LONG-DISTANCE DIALING SERVICE--According to Heilongjiang RIBAO, beginning at 0000 on 21 April, Harbin, Qiqihar, Mudanjiang, Jiamusi and Daqing municipalities formally opened the microwave-circuit long-distance dialing service to various localities throughout the country. The microwave communication is a modernized means of communication and has the advantages of stable communication and clear reception. The opening of the microwave-circuit service prepares the ground for the establishment of long-distance automatic dialing service. [Text] [SK020128 Harbin Heilongjiang Provincial Service in Mandarin 2200 GMT 21 Apr 82]

NEW NINGXIA TELEVISION CENTER--Yinchuan, June 7 (XINHUA)--The 10-storied building and 180-meter high tower for the new Ningxia television center have been completed. The center is expected to open next year. The central people's government has allocated 16 million yuan to Ningxia Hui Autonomous Region for the development of television. A northwest China region with a population of 3.83 million, mainly of the Hui, Han and Manchu nationalities, Ningxia now has 60,000 black and white and color television sets. Five large TV relay stations have been built in Yinchuan, the regional capital, and Dawukou, the main coal mining area, and 20 smaller ones have been erected by district governments, factories and mines. [Text] [OW070736 Beijing XINHUA in English 0725 GMT 7 Jun 82]

CSO: 5500/2268

BRIEFS

NEW RADIO STATIONS--The director general of the public relations department and the Loxley International Company representative have signed a contract for the purchase of transmitters for 11 radio stations to be set up for broadcasting educational programs. The construction and installation of transmitters of the 11 radio stations will be completed between early 1983 and 1984. Radio Thailand's network 2 for educational purpose is using funds from the World Bank and the government counterpart fund totalling 314,046,935 baht. [Text] [BK281349 Bangkok Domestic Service in Thai 1300 GMT 27 May 82 BK]

CSO: 5500/5853

BUON MA THUOT-MO DRAC TELEPHONE LINE COMPLETED

Hanoi NHAN DAN in Vietnamese 6 Jun 82 p 1

[Unattributed article: "Dac Lac Completes Construction of 70-Kilometers-Long Telephone Line"]

[Text] The Dac Lac Posts and Telegraph Service has just completed the construction of, and brought into use, a 70-kilometers-long main telephone line between Buon Ma Thuot and Mo Drac.

Because the province has many thick forests, high mountains, and deep rivers, many difficulties are encountered in constructing a telephone network, so communications between the provincial capital and the districts were carried out by a radio network. In order to improve the quality of communications and do a good job of meeting the requirements of the party committee echelons and the local administrations, the Dac Lac Posts and Telegraph Service decided to construct the Buon Ma Thuot-Mo Drac telephone line. The line crosses hundreds of deep rivers and streams, dozens of high mountains, and thick jungles. Although the project exceeded their design and construction capabilities, the cadres and workers of the Dac Lac Posts and Telegraph Service made all-out efforts to do the designing and constructing by themselves. Using local materials and raw materials, they were able to produce hundreds of poles and cross-arms and salvaged hundreds of tons of telephone line, thus saving tens of thousands of dong of public funds.

In addition to constructing that new telephone line, Dac Lac also repaired and restored to use the 120-kilometers-long Buon Ma Thuot-Play Cu line, and completed the installation of a three-way relay station 10 days before the deadline, thus helping improve telephone communications between Dac Lac and many other places.

5616
CSO: 5500/5845

POLITBURO DISCUSSES INFORMATION POLICY 18 JUNE

AU231750 Warsaw TRYBUNA LUDU in Polish 19-20 Jun 82 p 1

[PAP report: "Meeting of the PZPR Central Committee Politburo"]

[Text] On 18 June the PZPR Central Committee Politburo acquainted itself with an appraisal of the activity of the mass media of information and propaganda.

It was said that the press, radio and television are fulfilling the program tasks that have been laid down by the party since 13 December 1981. It was stressed that this activity is difficult, responsible and aimed at achieving social confidence. At the same time, this work involves a battle against hostile subversion, which is exploiting the difficult sociopolitical situation in our country in order to sow confusion and unrest.

It was said that the activity of editors and journalists is an exceptionally important element in ideological and political activity and upbringing, in economic education and in promoting citizens' initiative, activity and discipline. It is also a form of consultation on important social and economic matters. It was stressed that more attention must be paid to effective action, which involves honest information, convincing argument, reacting quickly to matters concerning people as a whole and individually, and the presentation of the country's most important matters to the people.

It was stressed that the existing model for the press, radio and television should be improved, and greater attention devoted to varying the way these media act. The local press, whose importance and role have grown considerably, should be strengthened. Delivery of the press should be improved, particularly to rural areas.

The Politburo acquainted itself with the changes that are appearing on the publishing market. An appraisal was made of such phenomenon as the drop in the number of people reading the press. The material base of the press, radio and television was looked at, and undertakings aimed at improving the working conditions of editors and journalists were discussed.

The Politburo acquainted itself with the press bill, which has been prepared by the government codifying commission in accordance with the resolution of the Ninth PZPR Congress. It was said that this important document should be submitted to wide social consultation.

CSO: 5500/2281

STATEMENT TO UN PROTESTS WESTERN MEDIA ACTIVITIES

LD262118 Warsaw PAP in English 2024 GMT 26 Jun 82

[Text] New York 26 Jun (PAP) -- The Polish delegation to the present session of the U.N. Committee for Information today presented a statement to protest the Western propaganda campaign against Poland and specify the Polish stand on international relations in the field of information.

The Polish delegation voiced strong protest against using radio waves for interference in Poland's internal affairs and for inflaming the international situation. It reserved for itself the right to take necessary (?steps at) the U.N. forum to oppose activities directed against Poland.

"Poland protests against the aggressive propaganda campaign launched in Polish by five Western radio stations, and in particular by the radio calling itself "Free Europe." They are pursuing a policy of overt interference in Poland's internal affairs under the pretence of information activity and abuse the freedom of information," the statement said. "This kind of activity is tantamount to propaganda aggression against Poland. Polish authorities have at their disposal full evidence which can be made available on request.

"The programmes beamed by the five stations are an overt violation of the basic principles of international law and are aimed to instigate unrest and disturbances," the declaration charged. The activity of these radio stations causes deterioration of relations among states and is a challenge to efforts aimed to establish a new and more just information order in the world.

"We fully share the growing criticism by the developing countries of actions by some of the main Western information agencies which aim to impose their political principles, views and ways of thinking on other nations. The international information and communication order should reflect the interests of all participants in international life and induce a joint concept and principles of information. The Polish Government highly assesses the role which UNESCO plays in seeking a common denominator. Exchange of information is part of international relations, and that is why the principles of exchange here should be specified through principles of international law," the statement said.

"Abuse of mass media by governments and imperialist circles for propaganda campaigns against other nations calculated to interfere in other nations' internal affairs and to affect political developments falling within the national jurisdiction of those states is compatible with the above principles. An adequate balance between the freedom of speech for various mass media and the responsibilities for using them should be determined for the benefit of all sides.

"Poland is not opposed to the idea of the freedom and free flow of information, but is critical of some Western concepts and means of putting them into effect," the statement said.

CSO: 5500/2281

RADIO STATIONS ORDERED TO CUT POWER

LD241354 Belgrade TANJUG Domestic Service in Serbo-Croatian 1117 GMT 24 Jun 82

[Text] Belgrade, 24 Jun (TANJUG) -- Radio broadcasting organizations will in future reduce their power consumption by one-third and sometimes by one-half. This is made obligatory by the regulations, adopted by the Federal Committee for Transportation and Communications, concerning the technical and economic conditions under which radio broadcasting installations may operate within the medium waves.

This document, better known as the regulations on medium-wave radio diffusion, obliges radio stations to operate at half capacity during the day and at full capacity at night, thereby saving electricity.

Radio stations are great consumers of electric power. The 2 mw Radio Belgrade transmitter, for instance, uses up as much power as the whole of Kraljevo, which is one of the largest consumers in Serbia.

CSO: 5500/2281

BRIEFS

DIRECT DIALING ESTABLISHED--The National Institute of Telecommunications has announced that automatic telephone communication has been established with Argentina, Chile, Bolivia, Brazil and Colombia, through the direct dialing system. [PA212148 Panama City LA ESTRELLA DE PANAMA in Spanish 15 Jun 82 pp 1A, 12A PA]

CSO: 5500/2286

NATION WILL OWN TELECOMMUNICATIONS SATELLITES IN 1985

PY020449 Buenos Aires LATIN in Spanish 1745 GMT 1 Jul 82

[Text] Brasilia, 1 Jul (LATIN-REUTER)—Official sources reported today that in 1985 Brazil will become the first Latin American nation to own operating satellites in orbit for its telecommunications system.

Communications Ministry spokesmen indicated that the Brazilian Government yesterday signed contracts to purchase two domestic satellites and launch them into space at the overall cost of $200 million.

The satellites, which will have 12,000 telephone, telex and television channels each, will be supplied by the Spar-Huges Canadian-U.S. consortium which will receive $133 million for both satellites and their subsequent maintenance.

The satellites will be launched between February and July 1985 by the French Arianespace Enterprise which will use Ariane-3 type rockets to launch the satellites from the Kourou base in the French Guyana at the cost of $58 million. An additional $14 million will be spent on insurances, the source said, explaining that Brazil has obtained loans from Canadian and French banks to finance the program.

The useful life of the satellites will be 8 years and according to Communications Ministry sources the utilization of these satellites by the Brazilian telecommunications system is economical, feasible and compatible with the nation's needs and size.

Owning these satellites will facilitate the political, economic and social integration of remote Brazilian regions currently virtually unconnected to the national telecommunications system.

Official reports stated that by 1985 a tracking station will be installed in the Amazon region and a land network of 22 antennas will span the entire country.

This network will facilitate the integration of areas, still lacking microwave links, to the national telecommunications system and will provide additional communications to those already endowed with sufficient infrastructure.

CSO: 5500/2287

BRIEFS

LOAN FOR SATELLITES--Brazil today signed a loan with Eximbank in Washington for $42.5 million to purchase satellites and equipment. The amortization of the loan will be payable only after the first satellite is launched. [Sao Paulo Radio Bandeirantes in Portuguese 0230 GMT 24 Jun 82 PY]

CSO: 5500/2281

STATION NOTES DEBATE OVER RADIO MARTI ANTENNAS

PA190117 Havana International Service in Spanish 1800 GMT 18 Jun 82

[Text] Lt Cmdr Mark Neuhart, public affairs officer for the U.S. Caribbean Forces, has revealed that the U.S. Navy is building 4 250 -foot antennas to be used by the so-called Radio Marti, which Washington is establishing to broadcast subversive propaganda against Cuba.

In statements to the Miami HERALD, Neuhart said that two of the antennas, located in the Florida Keys, are completed and that the other two will be finished this summer.

Representative Timothy Wirth, a Democrat from Colorado, said on the subject that the expenditure of any funds for facilities to make Radio Marti operational is illegal without the passage of authorizing legislation.

Wirth, who is also chairman of a House subcommittee on telecommunications, sent a message to the State Department and the Pentagon stating this position.

The plan to create a subversive radio station directed against Cuba was presented to the U.S. Congress last year by U.S. President Ronald Reagan.

CSO: 5500/2281

PRESIDENT INAUGURATES SATELLITE NETWORK

PA232148 Mexico City International Service in Spanish 0200 GMT 23 Jun 82

[Text] Today President Jose Lopez Portillo inaugurated 71 ground stations that will permit a large segment of the Mexican population to view government and private television programs.

In this manner, the second phase of the installation of television stations has been completed. The third and last phase of the program will begin in September, providing television coverage to all of Mexican territory.

At the ceremony Emilio Mujica Montoya, secretary of communications and transport, announced that telecommunications and radio broadcasting services will soon be available to any place in Mexico. He said that the project's basic objective is to provide the Mexican people with culture, technology and recreation.

Mujica Montoya also noted that this modern communications network, which operates via satellite, will have a very important effect on the country's integration and will replace the microwave network in the transmission of television signals.

CSO: 5500/2281

AFGHANISTAN

MINISTRY OF COMMUNICATIONS RENEWING, EXPANDING FACILITIES

Kabul KABUL NEW TIMES in English 15 Jun 82 p 2

[Part 1, Serial]

[Text] To maintain relations, broadcast radio and television programmes, and to offer postal services all over the globe make the sum total of communications. As a mass media, communications have a considerable and valuable role in the field of economic, social and cultural growth and development of human societies.

Therefore, the elevation and development of the economic and social sector requires the development and expansion of communication networks, all over the world and all the scientific and technological transformations should be reflected in the field of communications. Of course the fulfillment of this task requires fruitful utilisation of all the available means and renewal of the old systems, which are not of the desirable utility from the technical and economic viewpoints, and finally utilisation of the new phenomena which emerge in the field of contemporary technology.

On the basis of this principle, the Democratic Republic of Afghanistan, having the desire and making consistent efforts for rapid social development, expansion of productive activities and growth of all other sectors, has also invested communications with great potential with a view to provision of better communication services and further improvement of the means of mass media. It is expected that, with the implementation of the proposed plans, not only the peoples' needs inside the country will be met in the field of communications, but great changes will also occur in the communication system at the international level.

Considering these aims, the accomplishments of the Communications Ministry in Afghan year 1360 (1981-82) can be summarised) as below:

a. In the development plan sector:

The development plan of the ministry of envisages 21 projects:

1. The project of the Mazar-Hairatan channel,

2. The project of the Mazar, Sheberghan, Maimana, Taluqan, Faizabad channel.

3. Project of the provisional systems.

4. Project of northern microwave systems,

5. Project of South and West microwave system.

6. Project of expansion of the automatic telephone system of Shahre Naw and Shershah Mena.

7. Project of automatic telephone system of micro-region.

8. Project of the automatic telephone system for Khairkhana Mena.

9. Project of small automatic stations.

10. Project of a new automatic telephone system of Kandahar.

11. Project of the building of the ministry.

12. Project of the Constructions of the ministry.

13. Project of postal development.

14. Project of an artificial satellites station.

15. Project of development of communications networks in the provinces.

16. Project of expansion of the telex station.

17. Project of medium waves of 1,000 kilowatts.

18. Project of wireless stations.

19. High-capacity project of short waves.

20. Project of a television repairing workshop.

21. Project of a transport station of television.

It is worth mention that, with a total investment of Afs. 197,310,000 and $10,855,662, a certain percentage of these projects have been completed and are partly being utilised.

The project of a land station for artificial satellites, the Shamshad which was inaugurated officially on Hoot 7, 1360 (February 26, 1982) is one of them. This station has for the first time prepared the ground for telephone, telegraph and telex communications as well as an exchange of television programmes by satellites through the Soviet Union with other countries.

The initial capacity of this station is 12 communicational channels and one television channel and, in case of necessity, has the possibilities of expansion and activation of additional channels,

(To be continued)

CSO: 5500/5344

BRIEFS

TELEPHONE CENTERS IN ESFAHAN PROVINCE--Tehran (IRNA)--The Telecommunications Company of Iran announced that telephone centers were opened in the villages of Sa'id Abad and Veast, in Isfahan Province during the past week. These villagers were supplied with facilities to contact any part of Iran. The announcement further said two other villages, namely, Sakzi and Asheq Abad had been supplied with telephone centers during the previous month. According to the announcement meanwhile telecommunications offices were opened in two districts of Gilan Province (Northern Iran) on the occasion of the birth anniversary of the savior of humanity, Imam Mahdi (A.S.). [Text] [Tehran KAYHAN INTERNATIONAL in English 17, 19, 21 Jun 82 p 4]

NEW FACILITIES NEAR MARAND--Tehran (IRNA)--The spokesman of the Telecommunications Company of Iran announced that on the occasion of the birth anniversary of Imam Mahdi (A.S.) and the World Day of Mustaz'afeen (the oppressed), telecommunications offices were opened in the villages of Kahriz and Yegan- Olia, near the township of Marand, in the East Azarbaijan Province. According to the announcement as a result of this project the villagers were provided with facilities to contact other parts of the country. [Text] [Tehran KAYHAN INTERNATIONAL in English 17, 19, 21 Jun 82 p 4]

TELEPHONE CENTER IN ESFARAYEN--Mashad (IRNA)--On the occasion of the auspicious birth anniversary of Imam Mahdi (A.S.) and the World Day of Mustaz'afeen (the oppressed), an automatic telephone center was inaugurated in the township of Esfarayen, Khorasan Province, reported an IRNA correspondent in Mashad, the capital of the province. According to the report as a result of this project the inhabitants of Esfarayen were provided with the facility to contact other parts of the country. [Text] [Tehran KAYHAN INTERNATIONAL in English 17, 19, 21 Jun 82 p 4]

CSO: 5500/5345

BRIEFS

FOREIGN SATELLITE USE RESTRICTED--Communications Minister Mordekhay Tzipori has banned material filmed in west Beirut from being transmitted via Israel's earth satellite. Tzipori said he had received the government's consent for this move. He told our correspondent Gadi Sukenik that most of the material transmitted by foreign television stations is very hostile to Israel and there is no reason why Israel should transmit enemy broadcasts. Tzipori said he will not be deterred even if the television stations damage Israel's image in the world following the move he adopted. After the satellite station in Beirut was put out of operation, Israel made it possible to transmit material from Lebanon via the satellite station in 'Emeq Ha'ela provided that the material passed censorship. [Text] [TA291252 Jerusalem Domestic Service in Hebrew 1200 GMT 29 Jun 82]

CSO: 5500/2282

UNITED ARAB EMIRATES

'WAM' REPORT ON AGENCY'S STRUCTURE, ACTIVITIES

GF221500 [Editorial Report] Abu Dhabi WAM in Arabic at 1200 GMT on 22 June 1982 carried an approximately 3,000-word report on the fifth anniversary of the beginning of operations by the EMIRATES NEWS AGENCY, WAM. The agency has 9 employees in its editorial department, 5 in the English department, 30 reporters and correspondents, 23 employees in the photography department, 21 employees in the news cinematography departments, 2 in the archives department and 9 employees in administration. During the period 1 January 1982-31 March 1982 WAM covered 4,862 news stories in the 7 Amirates of the UAE as well as 827 television stories and distributed 15,931 pictures.

WAM has a special network for transmitting photographs to the UAE's eight daily papers and supplies the UAE's television stations with local television films. WAM has reporters in Tunis, Jordan, Cairo, Beirut, Paris, London, Washington and New York who send their stories via Telex, telephone or direct line.

In the first quarter of 1982 WAM transmitted 5,935 news stories; it transmitted 6,488 stories during the same period in 1981. WAM has exchange agreements with about 30 Arab and foreign news agencies, but only 12 percent of the news it transmits are the fruit of these agreements. WAM has bilateral agreements with INA, TAP, MAP, SANA, KYODO and YONGTAP. WAM receives WAKH transmission via a duplex teleprinter line and transmits it on its general network without alteration. WAM also supplies the pool of nonaligned news agencies with selected reports through the NONALIGNED NEWS AGENCY's regional office in Baghdad. Some news reports are sent by the pool directly to TANJUG and to the secretariat of the Nonaligned Coordination Bureau in New Delhi. WAM is also a member of the Union of Arab News Agencies.

WAM transmits by RTT to WAKH, which receives WAM's transmission throughout the day "and selects items which WAKH includes in its internal and external transmission. Similar arrangements exist with KUNA, QNA and SPA."

WAM transmits on a frequency of 14764 kHz--a WAKH frequency--which covers the Middle East from "Beirut to Rabat and from Tehran to Cyprus. All news agencies within this range can receive WAM's transmission. Transmission times are from 1000 [0600 GMT] to 0100 [2100 GMT] UAE time. WAM also transmits on 12255 kHz during the evening period."

WAM's budget is part of the budget of the UAE Ministry of Information and Culture. Any enquiries can be addressed to: WAM, P.O. Box 3790, Abu Dhabi, UAE. Telephone 327770.
CSO: 5500/2282

LESOTHO

BRIEFS

UNESCO TO DISCUSS NEWS AGENCY--A two-man mission of UNESCO arrived in Maseru yesterday afternoon on an official visit. They are Mr (Alex Kwamin), the Nairobi-based regional advisor for communications in Africa, and Mr (Dekorter), a UNESCO engineer based in Amsterdam, Holland. During their stay there, the UNESCO officials will discuss with the authorities of the Ministry of Information and Broadcasting plans to establish the LESOTHO NATIONAL NEWS AGENCY. When fully operational, it is expected that a daily newspaper will be launched in Lesotho. It is also expected that the LESOTHO NATIONAL NEWS AGENCY will feed the PAN-AFRICAN NEWS AGENCY with news. Two officials of the Ministry of Information and Broadcasting recently attended the meeting of the PAN-AFRICAN NEWS AGENCY in Lusaka. This morning the UNESCO officials had a meeting with the permanent secretary for information and broadcasting, Ntate (Viti Ndobe), and this afternoon they will pay a courtesy call on the minister of information and broadcasting, Ntate C.D. Molapo. [Text] [BM240620 Maseru Domestic Service in English 1130 GMT 23 Jun 82]

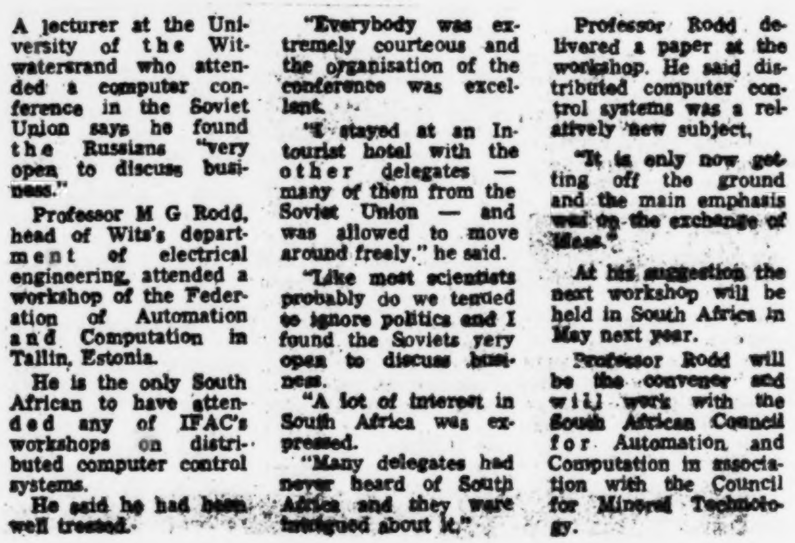
COMMERCIAL RADIO STATION--A commercial radio station is to be established at Sani Pass in Lesotho. It will broadcast mainly to the Indian and Zulu communities in the neighboring Natal Province of South Africa. The project is being financed by a South African company, and the Government of Lesotho will benefit through tax earnings. [Text] [MB250949 Johannesburg International Service in English 0630 GMT 25 Jun 82]

CSO: 5500/2281

PROFESSOR REPORTS ON COMPUTER CONFERENCE IN USSR

Johannesburg THE STAR in English 3 Jun 82 p 6

[Text]



A lecturer at the University of the Witwatersrand who attended a computer conference in the Soviet Union says he found the Russians "very open to discuss business."

Professor M G Rodd, head of Wits's department of electrical engineering, attended a workshop of the Federation of Automation and Computation in Tallin, Estonia.

He is the only South African to have attended any of IFAC's workshops on distributed computer control systems.

He said he had been well treated.

"Everybody was extremely courteous and the organisation of the conference was excellent.

"I stayed at an Intourist hotel with the other delegates — many of them from the Soviet Union — and was allowed to move around freely," he said.

"Like most scientists probably do we tended to ignore politics and I found the Soviets very open to discuss business.

"A lot of interest in South Africa was expressed.

"Many delegates had never heard of South Africa and they were intrigued about it."

Professor Rodd delivered a paper at the workshop. He said distributed computer control systems was a relatively new subject.

"It is only now getting off the ground and the main emphasis was on the exchange of ideas."

At his suggestion the next workshop will be held in South Africa in May next year.

Professor Rodd will be the convener and will work with the South African Council for Automation and Computation in association with the Council for Mineral Technology.

CSO: 5500/5842

BRIEFS

MALTESE-EUROPEAN RADIO PLANS--At 1500 today, Maltese Prime Minister Dominic Mintoff arrived in Athens. Tomorrow, he will meet with Prime Minister Andreas Papandreou. Maltese Foreign Minister Alex Sceberra Trigona, who is accompanying Mr Mintoff in Athens, called this afternoon on Dhimitrios Maroudhas, deputy minister in charge of press issues, and discussed the possibility of establishing in Malta a radio station for the Mediterranean countries. According to the initial proposal, this radio station will broadcast in Arabic, English, French and Greek. Mr Maroudhas and Mr Trigona also held discussions on the rumored transmission of television programs via satellite beamed to Europe and other areas. These transmissions are not wanted by Greece, Algeria and other countries, whereas many European countries are in favor of them. [Excerpts] [NC222027 Athens Domestic Service in Greek 1830 GMT 22 Jun 82]

CSO: 5500/2282

REVOLUTION IN TELECOMMUNICATIONS INCREASES NEED FOR NEW LAW

Helsinki HUFVUDSTADSBLADET in Swedish 27 May 82 p 12

[Article by Torsten Ekman]

[Text] There seems to be total disagreement on how the new telecommunications law should read. Now that the Ministry of Communications is beginning work to draft the law, what it has to work with is an extraordinarily divided committee recommendation and equally divided statements of opinion from other sources. The Association of Private Telephone Companies accuses the Posts and Telecommunications Board [PTS] of trying to acquire a complete government monopoly that will strangle the activity of the private telephone companies. The Posts and Telecommunications Board's view is that the private telephone companies are pursuing a line that will result in a further splintering of telecommunications activity in the country.

The source of the quarrel over telecommunications can be traced to the technical development that has resulted in new functions related to telecommunications traffic. The basis of today's activity is the old Telephone Statement of 1886 and the Telegraph Law of 1919.

But after all, those laws could not foresee the new services now being offered by the telecommunications system. These include telefax, which transmits written documents or drawings over telephone lines; computer networks, which permit the transmission of data used in automatic data processing; mobile telephones; teletex, which is used for word processing and rapid text transmission; and videotex, in which information is supplied over telephone lines between a data bank and a TV terminal. There are also videoconferences, in which TV screens are used, as well as the nationwide paging system.

Agreement in 1972

The only point agreed on by the two parties to the telecommunications quarrel is that a new law is needed as quickly as possible.

The telecommunications quarrel started as far back as the end of the 1960's. In 1969 and 1970, the Post Office and the private telephone companies discussed and agreed on a division of labor. That agreement covered the general data transmission network. It was signed in 1972 and was to remain in effect until

1980. It can be said that the system worked very well at the beginning, since activity at that time was of insignificant proportions. But data transmission developed rapidly. When the agreement was signed, the country had only 700 subscribers. But 6 years later--in 1978--there were 10 times as many. And that was when the problems and conflicts entered the picture.

The quarrel was over the question of who would be responsible for the data transmission system where long lines were involved. The Post Office felt that it came under the Telegraph Law, meaning that the government would be responsible for that activity. A dispute arose at the same time concerning the telecopying, or telefax, system. The Association of Private Telephone Companies went to the attorney general to question the legality of the PTS request for a special permit for telecopying.

The attorney general noted in his report that the current law was inadequate and he could therefore not render a correct decision. He called for prompt steps to revise the law.

It gradually became clear that the data transmission agreement did not provide an adequate basis on which to operate. To come up with an interim solution, Veikko Saarto, who was minister of communications at the time, called the parties together for a meeting in August 1981. The talks did not produce the desired results, and the situation became worse.

The committee for the telecommunications law was busy at the same time. At the end of February 1982 it produced a report that brought dissenting opinions from practically all the parties involved.

Circulation of the report for comment has now come to an end, and the next step will be to come up with a legislative bill. The objective is to submit that bill to Parliament this fall.

New Committee

In its statement of opinion, the Association of Private Telephone Companies points out in no uncertain terms that the committee's proposal is useless as a basis for a bill. It says that circulation of the committee report for comment has not improved matters. The association is calling for the appointment of a new, broader-based committee with more equal representation for the various parties concerned.

If the committee's proposal is implemented, our traditional form of organization for the telecommunications industry will be changed. Rather than being a branch of private industry, it will become a state-run function.

The law should aim at insuring that telecommunications traffic is an independent branch of business at its point of origin. The Association of Private Telephone Companies admits, however, that some degree of regulation is needed. But it is important that sectors which do not require special regulations be kept distinct.

The areas that do not require regulation include subscribers' terminals and the various types of service that can be provided by the telecommunications system.

Self-Supervision by Post Office

According to the association, one basic issue in the legislation is the way in which the operation of telecommunications traffic is to be organized and the way in which supervision by the authorities is to be set up. It is felt that those two functions should be clearly distinct from each other.

Under the present system, the Posts and Telecommunications Board grants franchises for private telephone companies and inspects equipment. According to the private telephone companies, what this means in practice is that the Post Office supervises itself.

The Association of Private Telephone Companies therefore feels that franchises should be granted by a ministry, and its report recommends the Ministry of Communications. As far as inspection of telecommunications equipment is concerned, the association suggests that a Telecommunications Inspectorate be established along the lines of the present Electricity Inspectorate. That inspectorate would be established by merging all the agencies now concerned with inspection. The committee for the telecommunications law wants the Posts and Telecommunications Administration to continue handling that function.

The association also recommends the establishment of a negotiating delegation for the telecommunications industry. That delegation, which it says should consist of industry representatives, would prepare long-term plans for the sector's development.

Regional Distribution of Activity

Another basic principle, in the association's view, is that activity should be divided up on a regional basis. The telecommunications network should be built up by region so that activity will be based on service to local subscribers linked to the telecommunications system. This means that the local telephone company for a particular area would be responsible for all services offered by the telecommunications system.

The subscriber would be able to use his terminals for access to all the services that it is technically possible to provide. The association feels that the committee's proposal is incorrectly based on the idea that telecommunications activity can be divided up according to the various kinds of terminals and the possibilities for their use.

The committee's report proposes that the franchise granted to each telephone company specify which telecommunications services that company can provide. The government would then be responsible for all other functions.

The private telephone companies regard that allocation of functions as unthinkable. The Posts and Telecommunications Board must not move into another telecommunications company's system or force its way in between the subscribers and their telephone company. The association says in its statement of opinion that such a system would result in more disputes.

Fragmentation

The statement of opinion issued by the Posts and Telecommunications Board calls attention to the fragmentation that exists in the telecommunications industry.

Pekka Tarjanne, general director of the Posts and Telecommunications Board, points out, however, that the objective is not to put an end to activity by the individual companies.

He says: "That would not even be possible, since the Posts and Telecommunications Administration cannot take over the functions of the private companies."

But he does advocate voluntary mergers of the companies so as to reduce their number. About 20 separate telephone companies would be a suitable number, whereas there are currently about 60.

In its statement of opinion, the Posts and Telecommunications Board stresses the principle of local monopolies for the telecommunications system. Free competition cannot be allowed in setting up networks and building exchanges. Neither can private companies be allowed to step in and take over only the profitable lines and functions and thus skim the cream off the top.

On the question of dividing up telecommunications activity among different companies, the Posts and Telecommunications Board feels that the functions should not be split up among too many organizations. The entire field of activity should be overseen by an agency that has the necessary resources for doing the job.

New Agency Not Needed

Nor can nationwide telecommunications functions be transferred to different franchise holders. Also rejected are all proposals that administrative and watchdog functions be taken over by a new agency, as are plans to set up a delegation to handle planning and development tasks.

The statement of opinion says that such a division of activity would only increase bureaucracy. The board refers to other examples in Europe, among them Sweden, where the government, acting through its Telecommunications Administration, is in charge of all telecommunications traffic. It is pointed out that among other things, such a system has resulted in lower and more uniform rates than in Finland.

The Posts and Telecommunications Administration is said to be the appropriate agency for dealing with franchise applications.

On the question of dividing up the activity among different agencies, the board notes that the current proposed bill provides that the Posts and Telecommunications Administration will handle foreign traffic, contacts between the various groups of telephone networks, telegraph and telex traffic, and local traffic in its own areas.

On the basis of that interpretation, it is felt that data transmission is also the responsibility of the Post Office when connections between different local networks are involved.

According to the Posts and Telecommunications Board, the committee's report lacks rules covering videotex. It is felt that that activity is comparable to telegraph traffic and should therefore be part of the Posts and Telecommunications Administration's area of responsibility.

Will Ministry of Communications Be too Strong?

A quite heated power struggle is therefore underway in connection with the new telecommunications law. In part, it involves a struggle between the Posts and Telecommunications Administration and the private telephone companies. The private sector is afraid that the government monopoly in the telecommunications industry will eventually become total. For its part, the Posts and Telecommunications Board wants to reduce the fragmentation that now prevails.

The quarrel has its political aspect as well. There is a fear that the position of the Ministry of Communications will become too strong. That is considered especially alarming in view of the vigorous technical development being experienced in this industry.

11798
CSO: 5500/2255

TAMPERE PHONE CENTER IS FIRST IN COUNTRY WITH NEW 'AXE' UNIT

Helsinki HUFVUDSTADSBLADET in Swedish 27 May 82 p 12

[Text] It was reported in Wednesday's edition that the Tampere Cooperative Telephone Company was the first to hook up Europe's first entirely digital telephone exchange when it put its new AXE rural network exchange into operation. That report is challenged by its competitor Telenokia, which claims that the title actually belongs to Telenokia, since it hooked up its own system the day before.

To the layman, the discussion about "who got there first" may seem like a quarrel over nothing, but for professionals, the competitive situation is so tough that Wednesday's report and its contradiction by Telenokia are merely typical of the situation.

Telenokia claims it got there first because on the morning of Tuesday 25 May, the first subscribers were hooked up to the new DX-200 telephone exchange in Kokkola, which thereby became connected to the telecommunications network.

The DX-200 exchange was delivered by Telenokia, which did not accept Wednesday's news report that its competitor, L.M. Ericsson with its AXE rural network exchange, was the first, since the latter was not connected until Wednesday in connection with the 100th anniversary of the Tampere Cooperative Telephone Company.

L.M. Ericsson points out that it is not really correct to compare the two exchanges because technically speaking, two different things are involved. L.M. Ericsson's representative also calls attention to the fact that the Tampere exchange had been ready to operate for a long time. It was only its official dedication that was held on Wednesday in connection with the centennial celebration.

However that may be, Telenokia emphasizes that in any case, its exchange is the first of its kind to go into operation in Europe and that as such, it gives proof of the high standard of Finnish engineering.

The exchange's subscriber equipment is digital, and connections are made completely electronically all the way to the subscriber's telephone set.

The subscribers in the new 1,500-number exchange immediately received push-button telephone sets making it possible to use the DX-200 exchange's subscriber facilities.

If necessary, the DX-200 exchange can be expanded to include as many as 40,000 subscriber telephone connections.

11798
CSO: 5500/2255

MINISTRY PLANS DATA PROCESSING FINANCING, RESTRUCTURING

Paris L'USINE NOUVELLE in French 29 Apr 82 pp 48-50

[Article by Daniel Lacotte and Eric le Boucher: "Shock Treatment for the Data Processing Industry"]

> [Text] After the agreement signed between CII-HB [International Data Processing Company-Honeywell Bull] and Honeywell, its American partner, the government is going to be able to get into the data processing battle on all fronts: "super," "mini," "peripherals"...an ambition that requires considerable financial means.

The French data processing situation is bad. The trade deficit for this sector, 1 billion francs in 1980, has risen to 1.7 billion in 1981. The French manufacturers control only a third of the market. CII-Honeywell Bull is taking losses, and many other firms are scarcely better off (c.f. the folding of Logabax). In order to reconquer technological independence and rebuild this key sector of the electronics branch, a shock treatment is required.

The minister of industry, Pierre Dreyfus, has just presented the new provisions of the agreement of CII-Honeywell Bull with its American partner. That is a frist step. Now, with that mortgage paid off, all of the related files are being opened up again: the relationships that CII-HB, a recognized French leader in data processing, should establish with the other French firms, Thomson, CGE [General Electrical Company], Saint-Gobain, Matra; that of Olivetti, etc.

In fact, beyond the agreement of CII-HB with Honeywell, restructuring and financing are required for the entire data processing industry. L'USINE NOUVELLE is publishing the crux of it, based on an unpublished document of the Ministry of Industry. However, it is only after negotiations that the figures mentioned in the report will be definitively set. In June, in all probability, the overall figure will be known: on the order of 15 billion francs.

Supercomputing: In this area, the chips are officially down. The American Honeywell is having its share of the capital of CII-HB reduced from 47 to 19.9 percent, with the additional 27.1 percent being bought by the Bull Machine Company for 950 million francs. "This operation will give CII-HB its independence," Pierre Dreyfus emphasizes. In fact, according to the terms of the agreement, Honeywell loses all its rights as a privileged stockholder.

The American group will no longer have veto rights over the designation of the president of CII-HB nor over investment decisions in excess of 30 million francs, nor on absorption decisions. In addition, Honeywell will only have 2 (instead of 4) administrators out of 11 on the Administrative Council [Board of Directors].

But from the lips of Pierre Dreyfus, the term "independence" has still another dimension. It is recalled that Saint-Gobain had 51 percent of the capital of the Bull Machine Company and that it had a prime role in the CII-HB strategy. This collaboration will be examined again, according to means that remain to be negotiated, but it has already been decided that Jacques Stern, the new chief executive officer of CII-HB, "will report directly to the government."

Clearly it is a question of taking CII-HB strongly in hand so that "an active and ambitious industrial and marketing policy can be carried out," Pierre Dreyfus insists. In order to succeed in that, CII-HB must be given sufficient financial means. The latter are evaluated, according to the document, at 2.5 billion francs over 5 years (for capital funding itself) and at a 6.4 billion subsidy (an effort comparable to that of the calculation plan of 1976-1980 as a percentage of cumulative gross sales over 5 years.

The objective is to get on a firm footing again and to launch a worldwide strategy. CII-HB has always suffered from undercapitalization: at the end of 1981, the ratio of indebtedness to capital reached 3.34 (compared to 0.3 for Honeywell, 0.44 for Digital Equipment, and 0.47 for Burroughs). The debts exceed 4.4 billion, compared to 1.3 billion of capital funds, whence the urgency of the operation, which will consist of injecting 2 billion francs as quickly as possible. The contribution of the remaining 500 francs could be made in 1985.

Pursuit of Technical Cooperation Between CII-HB and Honeywell

This effort will make it possible to restructure the company, whose "poor organization is harmful to productivity and to the quality of services," it is stated at the Ministry of Industry. Therefore, the administrative, marketing, and technical services will be reorganized, and some activities of CII-HB could even be made into subsidiaries.

Finally, the agreement provides that technical cooperation will be carried out between CII-HB and Honeywell on the current and future product lines. That is a basic point in the measure where the majority of the technological knowledge comes from the United States. A pure and simple withdrawal of the American [company] (such as the 1976 agreements allowed it in case of the nationalization of CII-HB) would have been "a real disaster," Pierre Dreyfus emphasizes.

Toward a Line of French Minicomputers

And the government does not hide its satisfaction at having pulled off this new agreement, because CII-HB was going through an acute crisis (losses of 430 million francs in 1981, compared to a profit of 180 million in 1980). "The group was no longer managed. We have to correct the situation and invest," comments the minister of industry.

Minicomputers: In this sector, the objective is to have a line of entirely French-designed minicomputers. An industrial development company whose mission would be to design subassemblies could therefore be created. These basic systems would be integrated into the production of various French companies (Intertechnique, Logabax, Sfena-DSI, etc.) by 1986.

Along these lines, again according to the document, this industrial development company will be built around Thomson (with its subsidiary Sems) and CII-HB. In the midterm, this company could become the single pole of French minicomputers. It would then be charged with designing, manufacturing, and selling its products as an OEM /original equipment manufacturer/ (i.e., in large quanitities) on a worldwide scale.

This program of development and industrialization of a French-designed minicomputer will cost around 860 million francs over 4 years. This sum will be divided as follows: 480 million for the software, 260 million for the central units and the architecture, 120 million for the couplers and interfaces.

Home computers: Among the bottom-of-the-line professional home computers, the Ministry of Industry has to admit: "No French product can compete with manufacturers such as Tandy or Apple." The key to the success of these firms is specifically in the production of large annual volumes. This requires costly investments and the implementation of marketing networks capable of selling 70 percent of the production outside the domestic market.

The objective of the plan proposed for home computers is to take 15 percent of the European market by 1985 and to reconquer 50 percent of the French market by 1986. In order to succeed in this ambitious offensive, the government is going to rely on R2E (a CII-HB subsidiary specializing in home computers, 200 million francs in sales, 7,000 units sold in 1981). Thus, Thomson-CSF, which has just launched a professional home computer developed with the American firm Fortune, of which it controls 35 percent, is not connected with this operation.

Data Processing Peripherals: Constitute a European Group

The role of R2E "will be considerably reinforced, if its capital is increased." And marketing structures, principally devoted to exports, will be put in place. This action will require subsidies on the order of 300 million francs, or 150 million for development and industrialization, 100 million for software, 50 million for the creation of marketing networks.

Data Processing Peripherals: In this area, French industry has only one manufacturer of any size: CII-HB (middle-of-the-line magnetic discs and printers). Like the Europeans, it is totally absent from the rapidly growing sectors: large-capacity discs, floppy discs, bottom-of-the-line printers.

The idea of the Ministry of Industry would be to seize this opportunity to constitute a European group which would sign agreements with other partners--agreements on complementary products and, above all, on the ultimate creation of a marketing network covering Western Europe.

On the subject of data processing peripherals, the government expects to play the European card by leaving the monopoly to foreign manufacturers for the printers, but carry out an aggressive action to reconquer the magnetic disc market. The objective is take 20-40 percent of the European market. In addition, priority would be given to large-capacity discs (200 to 1,000 eight-bit bytes).

Finally, on the related subject of specialized peripherals, French industry has been better able to get a hold, along with Benson, IER [Printed Recording of Results], Transac, EMD [Marcel Dassault Electronics]. The government plans selective action (development in the sector of graphic consoles, for example) based on technological innovation, and emphasizing small and medium-size industries. For these operations, a sum of 300 million francs would be required.

The application of such a plan, of unquestionable scope, would lead by 1985 to a reestablishment of the balance of payments, to the reconquest of 20 to 25 percent of the European market, and to the creation of 10,000 jobs.

Francois Mitterrand is convinced: getting out of the crisis involves new technologies. At the time of budgetary restrictions, will the government give itself the necessary financial means? That is a political choice.

France - United States Competition
Sale of "mini" and terminals in France (in 1980)

Companies	"Mini"	Terminals	Total
CII-HB	460	250	710
Other French	580	540	1,120
Total France	1,050	790	1,830
IBM and compatible	530	680	1,210
Other Americans	1,050	240	1,290
Total American	1,580	920	2,500
European	570	300	870

Source: L'USINE NOUVELLE and reports by firms

The Americans clearly dominate, even if the results of the French are better in minicomputers and data processing peripherals than in large computers.

The Japanese Arrive
World Top Ten in Data Processing

Company	Market Share			Gross Sales (1981)* (in Data Processing)
	France	Europe	World	
	%	%	%	
IBM	31	35	36	24,175
Digital Equipment	1.9	3.4	4.6	3,198
Control Data	3.1	3.3	4.7	3,168
NCR	2.8	4.6	4.7	3,050
Burroughs	3.2	3.3	4.1	2,875
Univac	1.6	3.8	4.3	2,707
Fujitsu	—	--	2.5	1,910
Hewlett-Packard	2.4	2.6	2.6	1,785
Honeywell	--	0.8	2.7	1,800
CII-HB	19.5	7	2.1	1,600

Source: L'USINE NOUVELLE

*in millions of dollars

(The ratios of strength have evolved considerably since 1981 with the entry of the Japanese Fujitsu and Hitachi (1.08 billion dollars) and a weakening of the Europeans ICL [International Computers, Ltd], Siemens, and Philips, which cannot figure among the world's top 10 in data processing, and whose gross sales are respectively 1.3 million, 970 million, and 575 million dollars. It will be noted that CII-HB only controls scarcely 20 percent of the French market.

9969
CSO: 5500/2238

BRIEFS

NORDSAT STUDIES FUNDS--Oslo--On Wednesday [2 June] the Norwegian Storting voted 900,000 kroner to technical, economic and legal studies in preparation for Nordic radio and television cooperation in a Nordsat satellite. The money will cover Norway's expenditure this year in the preparatory phase through 1984, prior to a final decision being made about Nordic satellite cooperation. [NORSK TELEGRAMBYRA report] [Text] [PM091101 Copenhagen BERLINGSKE TIDENDE in Danish 4 Jun 82 p 4]

CSO: 5500/2268

END

JPRS 81348

23 July 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 229

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 81348

23 July 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 229

CONTENTS

ASIA

AUSTRALIA

Government Approval of Proposed Cable Link With Europe
(BUSINESS TIMES, 29 May 82) 1

BANGLADESH

Briefs

Press Commission Head Speaks 2

INDIA

Space Department Approves Satellite Plans
(THE HINDU, 16 Jun 82) 3

Papers Report Status of, Plans for INSAT-1A
(THE TIMES OF INDIA, 17 Jun 82, THE HINDU, 19 Jun 82). 5

Shorter Lifespan Possible
Details on Circuits, Other Matters

Briefs

Condition of 'Apple' Satellite 7
Electronic Telex Exchange 7

PHILIPPINES

Philippines Radio Laws Being Codified
(BULLETIN TODAY, 3 Jul 82) 8

BRAZIL

Gains in Development of Computer Market Examined
(Manuela Rios; O ESTADO DE SAO PAULO, 20 Jun 82)...... 9

JAMAICA

Briefs

Jamintel Development Program 19

NEAR EAST AND NORTH AFRICA

AFGHANISTAN

Ministry of Communications Renewing, Expanding Facilities
(KABUL NEW TIMES, various dates) 20

UNITED ARAB EMIRATES

Radio, TV Projects Reported
(KAHLEEJ TIMES, 10 Jul 82) 24

SUB-SAHARAN AFRICA

ANGOLA

Briefs

Lubango-Luanda Automatic Communications 26
Automatic Exchange 26

ZIMBABWE

Briefs

Satellite Phone Link 27

WEST EUROPE

FRANCE

National Assembly Adopts Provisions of Audiovisual Law
(Laurent Zecchini; LE MONDE, various dates) 28

More Export Desired
TV Independent of Government

DGT Official Says Terminals To Increase to 600,000 by 1985
(Eric Sorlet; ZERO UN INFORMATIQUE HEBDO, 26 Apr 82)... 36

Study Ranks Top 50 Firms in Domestic Data Processing
(Jean-Louis Cousin; ZERO UN INFORMATIQUE HEBDO,
3 May 82).. 39

CIT Alcatel, CII-HB, Olivetti Present Industrial Strategies
(Stephane Ilitch; ZERO UN INFORMATIQUE HEBDO,
17 May 82)... 42

AUSTRALIA

GOVERNMENT APPROVAL OF PROPOSED CABLE LINK WITH EUROPE

Kuala Lumpur BUSINESS TIMES in English 29 May 82 p 2

[Text] CANBERRA, May 28 THE possibility of a new telephone cable link between southern Europe and western Australia, via the Indian Ocean, was confirmed by the Australian government.

Government approval follows this week's support for the proposal given by the newly-appointed Minister for Communications, Mr Neil Brown.

Mr Brown was addressing the Indian Ocean cable planning conference in Perth, where he said a cable link was needed to offset present demand on satellite communications.

"The Indian Ocean region is totally dependent on the satellite medium for trans oceanic communications," he said, "and the need to diversify using cable as well as satellite circuits has become apparent."

"A number of countries have launched initiatives to fill the cable blank, and Australia welcomes them. The principals of all interested parties must now compare notes and take constructive steps toward the realisation of the plan."

Referring to the lack of communications cables across the Indian Ocean to Europe as a "blank on the map," Mr Brown stressed that action was needed immediately due to the large amounts of money such a project required. The long lead-time involved in planning and constructing major submarine cables was also proof of the need for early action, Mr Brown concluded. — AFP

CSO: 5500/8507

BRIEFS

PRESS COMMISSION HEAD SPEAKS--Chairman of the Press Commission Mr Ataur Rahman Khan on Monday said freedom of press must always be conditioned by sense of social responsibility, reports ENA. Mr Khan was speaking as chief guest at the launching ceremony of a new Bengali newspaper "Dainik Shakti." Mr Abdul Wahab, President of the Dacca Union of Journalists (DUJ) Mr Anwar Zahid, General Secretary of the DUJ Mr Amanullah Kabir and Editor of the new daily Mr Zainal Abedeen also spoke on the occasion. Mr Khan said it is true that freedom of press is an essential element of democracy, but democracy never conceives of responsible journalism, he added. He said certain sections of press in Bangladesh often takes to character assassination and personal canard on political rivals foresaking all norms of professional ethics and objectivity. This must be discouraged, he said. He said after independence the number of newspapers has grown up phenomenally. But the quality of newspapers, he said, did not improve to that proportion. Mr Khan said excuse is often made that quality journalism cannot be expected in underdeveloped countries like Bangladesh. He said newspaper reflected the intellectual standard of a nation. A country may be economically poor, but it does not necessarily imply that it is intellectually poor as well, he added. Mr Khan said journalists should make conscious efforts at improving the quality of journalism and help newspaper grow as an ideal institution and industry. Mr Anwar Zahid said a section of people is trying to revive the fascist attitude of BKSAL-period. This, he said, may jeopardise the newspaper industry as a whole unless checked right now. He said the role of newspapers and journalists at the moment should be to identify and resist those forces in the interests of promoting the cause of free press in the country. Mr Anwar Zahid said the formation of the Press Commission has fulfilled a long-felt demand of the journalists. He hoped that the Government which formed the Commission would also take measures for implementation of its recommendations. Mr Amanullah Kabir said newspaper owners must try to build newspapers as industry. Otherwise, he said, mere increase of their number will not do any good to the people or the profession. [Text] [Dacca THE BANGLADESH TIMES in English 22 Jun 82 pp 1, 8]

CSO: 5500/7166

SPACE DEPARTMENT APPROVES SATELLITE PLANS

Madras THE HINDU in English 16 Jun 82 p 1

[Text] New Delhi, June 15--The Government of India today gave its approval for three major space projects estimated to cost Rs 393.60 crores--the development of an earth-orbiting remote sensing satellite and two launch vehicles. The projects form part of the "space profile" of the Department of Space for the decade 1980-1990.

The satellite project, expected to be completed by 1985-86 at a cost of Rs. 62.30 crores, envisages the indigenous design and development of an Indian remote sensing satellite (IRS) of 800 kg. This is the first step towards providing a national space system for resources information, for use in agriculture, water management, forestry, hydrology, geology and coastal oceanography.

Detailed studies have been carried out for the configuration of the first IRS. The payload will consist of three linear image scanning sensors (LISS). The design of all the spacecraft elements has been worked out.

Modular Structural Concept: The IRS will be introducing for the first time a modular structural concept which can be used with a little modification for future missions as well. A detailed project report bringing out the salient features of all the elements including the data products and ground segments, has been prepared. The IRS will help crop yield forecasting, detection of crop diseases and pests, moisture stress, drought monitoring, fisheries, watershed modeling, etc.

SLV-3 Technology: The two launch vehicles approved are an augmented satellite launch vehicle (ASLV) and a polar satellite launch vehicle (PSLV). The ASLV is estimated to cost Rs. 19.73 crores and it will be using the technology and many subsystems of the earlier SLV-3.

The objective of the ASLV project is to achieve by 1983-84 the capability to launch a 150 kg satellite in near the earth orbit. It is an intermediate between the SLV-3 vehicld already developed for launching 50 kg satellites and the polar satellite launch vehicle which can launch 1,000 kg satellites.

Logical Outcome: The PSLV is estimated to cost Rs. 311.57 crores and is expected to attain the capability by 1987-88 for placing a 1,000 kg satellite in the polar-sun-synchronous orbit. The project is the logical outcome of launch vehicle technology development, including the use of established Indian capabilities in solid propellant systems and the acquisition of liquid propulsion technology. The PSLV project will be undertaken by the Vikram Sarabhai Space Centre in Trivandrum and SHAR at Sriharikota.

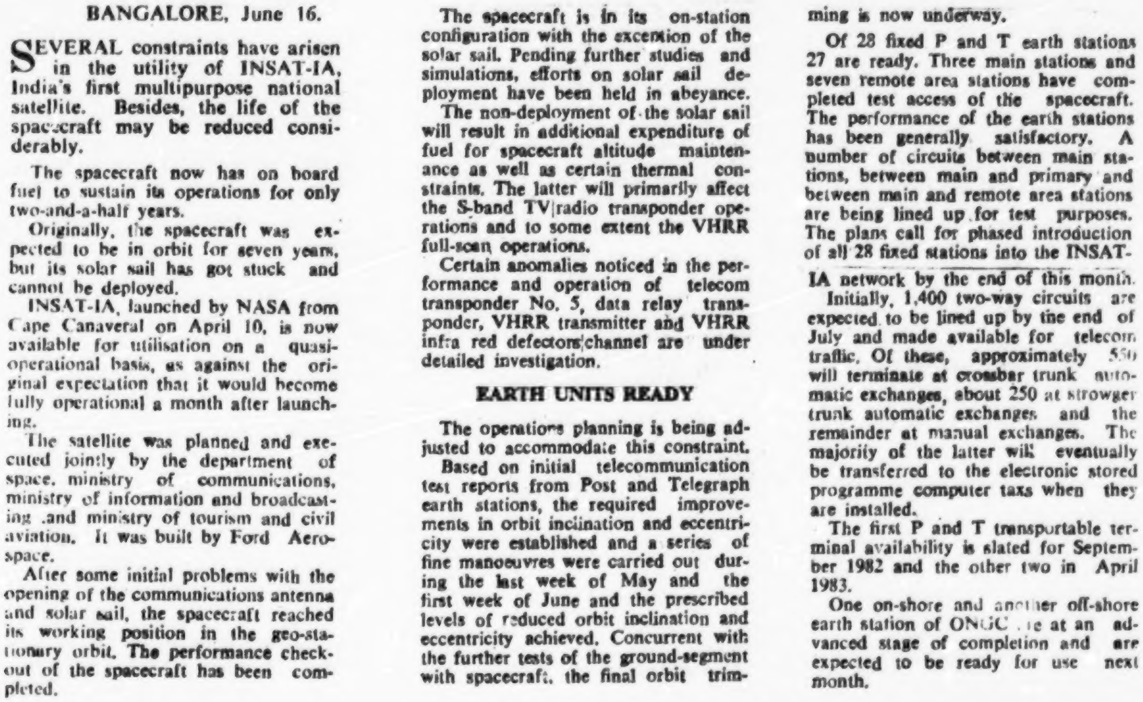
CSO: 5500/7163

PAPERS REPORT STATUS OF, PLANS FOR INSAT-1A

Shorter Lifespan Possible

Bombay THE TIMES OF INDIA in English 17 Jun 82 p 5

[Text]



BANGALORE, June 16.

SEVERAL constraints have arisen in the utility of INSAT-IA, India's first multipurpose national satellite. Besides, the life of the spacecraft may be reduced considerably.

The spacecraft now has on board fuel to sustain its operations for only two-and-a-half years.

Originally, the spacecraft was expected to be in orbit for seven years, but its solar sail has got stuck and cannot be deployed.

INSAT-IA, launched by NASA from Cape Canaveral on April 10, is now available for utilisation on a quasi-operational basis, as against the original expectation that it would become fully operational a month after launching.

The satellite was planned and executed jointly by the department of space, ministry of communications, ministry of information and broadcasting .and ministry of tourism and civil aviation. It was built by Ford Aerospace.

After some initial problems with the opening of the communications antenna and solar sail, the spacecraft reached its working position in the geo-stationary orbit. The performance check-out of the spacecraft has been completed.

The spacecraft is in its on-station configuration with the exception of the solar sail. Pending further studies and simulations, efforts on solar sail deployment have been held in abeyance.

The non-deployment of the solar sail will result in additional expenditure of fuel for spacecraft altitude maintenance as well as certain thermal constraints. The latter will primarily affect the S-band TV|radio transponder operations and to some extent the VHRR full-scan operations.

Certain anomalies noticed in the performance and operation of telecom transponder No. 5, data relay transponder, VHRR transmitter and VHRR infra red defectors|channel are under detailed investigation.

EARTH UNITS READY

The operations planning is being adjusted to accommodate this constraint.

Based on initial telecommunication test reports from Post and Telegraph earth stations, the required improvements in orbit inclination and eccentricity were established and a series of fine manoeuvres were carried out during the last week of May and the first week of June and the prescribed levels of reduced orbit inclination and eccentricity achieved. Concurrent with the further tests of the ground-segment with spacecraft, the final orbit trimming is now underway.

Of 28 fixed P and T earth stations 27 are ready. Three main stations and seven remote area stations have completed test access of the spacecraft. The performance of the earth stations has been generally satisfactory. A number of circuits between main stations, between main and primary and between main and remote area stations are being lined up for test purposes. The plans call for phased introduction of all 28 fixed stations into the INSAT-IA network by the end of this month.

Initially, 1,400 two-way circuits are expected to be lined up by the end of July and made available for telecom traffic. Of these, approximately 550 will terminate at crossbar trunk automatic exchanges, about 250 at strowger trunk automatic exchanges and the remainder at manual exchanges. The majority of the latter will eventually be transferred to the electronic stored programme computer taxs when they are installed.

The first P and T transportable terminal availability is slated for September 1982 and the other two in April 1983.

One on-shore and another off-shore earth station of ONGC are at an advanced stage of completion and are expected to be ready for use next month.

Details on Circuits, Other Matters

Madras THE HINDU in English 19 Jun 82 p 7

[Text] Bangalore, June 18--The 28 fixed earth stations of the P&T will be introduced into the INSAT-1A network in a phased manner by the month end.

Nearly 1,400 two-way circuits are expected to be linked up by the end of next month and made available for telecom traffic during the first year. Of these initial 1,400 circuits, nearly 550 would terminate at Crossbar Trunk Automatic Exchanges (TAXs), nearly 250 at Strowger Trunk Automatic Exchanges (TAX) and the rest at manual exchanges. The majority Strowger TAXs will eventually be transferred to the electronic stored programme computer TAXs when they are installed.

The first P&T transportable terminal availability is slated for September 1982 and the other two for April 1983.

Meteorological Data Processing: The Meteorological Data Utilisation Centre (MDUC) at the Indian Meteorological Department, New Delhi, for receiving, processing, dissemination and utilisation of the INSAT-1 and meteorological data is ready. Data image processing at MDUC has been successfully tested with INSAT-1A. The regular Very High Resolution Radiometer (VHRR) data reception at the Delhi Earth Station (DES) via a receiver will go into operation during late June. Till then an alternative arrangement for regular supply of INSAT-1A data to the MDUC from Master Control Facility (MCF) has been worked out, tested and implemented.

Transportable Terminal Modified: The ISRO transportable terminal has been modified and positioned at Akashvani Bhavan, New Delhi, to provide initial support for two radio networking and one TV networking/broadcast channel.

CSO: 5500/7164

BRIEFS

CONDITION OF 'APPLE' SATELLITE--Bangalore, June 18 (PTI)--India's first experimental geo-stationary communication satellite "APPLE" completing one year in orbit tomorrow, is expected to have an extended life of one more year. Though crippled with one solar panel undeployed, the 670-kg satellite has ulfilled all "its objectives and is still going strong," Dr U.R. Rao, director of the ISRO satellite centre said. Dr Rao said the extension of life of the drum-shaped APPLE, which was estimated to last one year earlier, was possible because of efficient management of fuel. Dr Rao said the APPLE had helped to conduct various sophisticated experiments on communication. UNI adds: The satellite was working normally and was being operated for about 14 hours a day, Mr R.M. Vasagam, director of APPLE project said. Mr Vasagam said major technical experiments such as time division multiple access (TDMA), spread spectrum multiple access (SSMA) and interconnections of computers have been gone through. The APPLE had also been used for nationwide telecasting. APPLE, forerunner of INSAT was launched by the European space agency's launcher Ariane from Kourou on June 19, 1981 and was positioned at its parking slot at 102 degree east longitude. Mr Vasagam said that a leading newspaper from Madras, "The Hindu" had used the satellite for facsimile printing and a paper mill in Orissa had successfully tried out computer interconnecting and data transfer through APPLE. He said the preparations were on for the satellite communication course involving the Indian Institute of Science by utilising APPLE. The course was expected to commence in July, he added. [Text] [Bombay THE TIMES OF INDIA in English 19 Jun 82 p 92

ELECTRONIC TELEX EXCHANGE--An electronic trunk automatic exchange and an electronic telex exchange technically known as Stored Programme Control Exchanges will be introduced for the first time in Calcutta by the end of this year. According to a Union Government Press Note issued on Tuesday the electronic trunk automatic exchange will have the capacity of 3,000 lines while the electronic telex exchange will have 2,000 lines. The work for installation of these exchanges is underway. These exchanges will considerably improve the STD and telex services, the note added. [Text] [Calcutta THE STATESMAN in English 16 Jun 82 p 9]

CSO: 5500/7162

PHILIPPINES RADIO LAWS BEING CODIFIED

Manila BULLETIN TODAY in English 3 Jul 82 p 8

[Text]

The government is now codifying all radio laws in the country for the purpose of promulgating a broadcast and telecommunications code. The proposed code will then be submitted to the Batasang Pambansa for proper action.

This was disclosed by Antonio C. Barreiro, deputy commissioner of the national telecommunications commission (NTC), during the recent 32nd annual general meeting of the Institute of Electronics and Communications Engineers of the Philippines (IECEP) at the Manila Garden Hotel.

In that convention, Barreiro, a former president of the KBP, called on his listeners not to resort to the use of third parties when transacting business with his office. He said that one of the causes of red tape in the government service is the use of third parties by those who transact business with the government.

By dealing directly with the office concern, the public not only save time and assure faster action but also help eliminate red tape, he said.

Barreiro also called on the IECEP for cooperation in order that the government can serve the needs of the professionals and the industry better.

The convention elected the following new officers and directors of the institute:

Rogelio E. Ramos, president; Dionisio R. Ababat, first vice president; Pedro A. Ybañez, second vice president; Oscar S. Villacorta, third vice president; Milagros S. G. Quintero, secretary; Fortunato Perlas, treasurer; Heraclio L. San Juan, auditor.

Joel Marciano, Cornelio Mendoza, Wilson Morrell, Isagani Naval, Tomas L.P. Rivera, Danilo Sy, and Pedro Torres, directors.

CSO: 5500/5859

GAINS IN DEVELOPMENT OF COMPUTER MARKET EXAMINED

Sao Paulo O ESTADO DE SAO PAULO in Spanish 20 Jun 82 p 52

[Article by Manuela Rios]

[Text] If the invoice total of U. S. $1.2 billion billed last year by the Brazilian computer industry brought little monetary profit, it did serve to allow the sector to gain greatly in the improvement of its image, to the extent that it defined its space in the overall industrial sector. An increase in demand estimated at between 15 and 25 percent per year and the existence of an installed park of 10,000 computers make it possible for the sector to expand its prospects of maturing, to increase the funding for research and the development of technology and programs, and to serve consumers better by offering new options.

Some estimate the billing total for this year at U. S. $2 billion, although 1.5 billion is believed to be a more realistic prediction. In any case, everything will depend on the development of the new enterprises which are entering the field, the survival of many of which is doubtful. It is estimated, for example, that of the 13 enterprises functioning today in the microcomputer sector--the new "stars" of the market, only seven or eight will still be operating within a year, after the natural selection phase which should follow the boom.

In order to achieve this development, the industry can rely on an increase in demand of about 40 percent, a projection which some regard as very modest in view of the increases in excess of 100 percent which some enterprises have seen in their invoicing. And the boom in microcomputers will certainly contribute to giving domestic industry a larger slice of the pie.

Of the U. S. $1.2 billion invoiced by the sector last year, the terminal industry accounts for 56 percent, but of this, only 27 to 30 percent (about U. S. $200 million) went to Brazilian computer factories, demonstrating the strong activity of multinational corporations in the large and medium equipment sector. The balance was divided between the service segment (design bureaus, software houses and consultants), accounting for 35 percent, and peripheral activities, accounting for 9 percent.

From the market reserve with which domestic industry was provided in 1977, through the phase of up to 2 central memory megabytes--which made it possible for the mini and microcomputer sectors to flourish--to the recent introduction into the country of personal computers, the picture in this sector has changed greatly.

But the old polemic concerning the national computer model continues, and 5 years later, whether this has really borne fruit is being debated. Did the market reserve effectively make it possible for Brazilian industries to produce computers, or did it only allow an increase in the number of enterprises functioning in the sector?

If the critics regard the national technological capacity to develop products as poor in the hardware (machine) sector--and this when the majority of the contracts for the purchase of technology signed by the five enterprises (COBRA [Brazilian Computers and Systems, Inc], EDISA [Digital Electronics, Inc], LABO, SID and SISCO) selected to serve the special minicomputers market are still in effect, they believe that the country is still at the zero mark in the software sector (the complex of procedures and programs to put the machines into operation). There is indeed a wide variety of applied program packages, but they have generally been developed on the basis of imported, if not simply smuggled, software, using languages which have often been superceded abroad. Thus the critical point of the question arises: the industry has a market reserve, but it seems that domestic technology is still nonexistent.

The industries defend themselves, claiming that they are increasing their investments in research and development both in the hardware and software areas, which account for about 10 percent of their invoicing today, and they complain that the government itself has not given them support in this area. The Special Computer Secretariat (SEI) in turn puts forth the counterargument as to the difficulty of limiting imports of software--how can the entry into the country of someone with a tape cassette in his luggage be prevented?--and the proliferation of enterprises with little capacity. In any case, a decree designed to provide incentives for the development of domestic software through exemption from the income tax has already been drafted.

The high cost of establishing industrial facilities and the heavy tax burden they bear--mainly on the import of components--are other reasons given for the limited resources oriented toward the research sector. However, the technicians in the sector themselves admit that it is the consumer who is amortizing these costs. Brazilian computers still often cost up to four times as much as their counterparts produced abroad. And although the users prefer to think that they are paying only for the hardware, many other components are included in the price, in which the cost of the developmental process which the Brazilian computer industry is trying to carry forward plays a large part.

Restrictions Hinder Large Firms

In the Brazilian computer market, it is a good thing to be small. In establishing the market reserve for domestic producers of mini and microcomputers in 1977, the government required producers of large systems to exercise prodigious feats of imagination to survive, among other things because the market reserve measure was not an isolated one. There is for example a ceiling on imports--on so-called peripheral or software machines, established at U. S. $200 million last year, of which U. S. $70 million may be used in this sector.

There are other restrictions even in the supposedly free sector for multinational companies pertaining to large systems. In 1977, for example, a proposal by IBM (which has been producing here for years) involving a medium computer was vetoed. And even today, in order to sell one large computer, a foreign enterprise is required to export three.

With such restrictions, it was natural that the businesses operating in the medium and large systems area would have to content themselves with more limited growth in their businesses. Both Murilo Loureiro, IBM director for foreign business in Brazil, and George Hertz, the marketing director for Burroughs, the firms ranking first and second in sales among the large producers--of which there are 11 in all, established in the country--speak of 1977 as the dividing line. Before that year, growth was occurring at a rate of 20 percent per year. Since then, the rate has dropped to 10 percent.

This does not mean total disaster, however. IBM in Brazil has not made its figures available, but it is an integral part of one of the largest world corporations, which has a sales volume in excess of U. S. $21 billion and profits of more than 5 billion. Burroughs, for its part, although its invoicing in the country dropped 10 percent in 1981, completed the year with sales totaling U. S. $110 million. Currently there are between 450 and 500 large or very large systems in the country. In the first category, IBM is the weightiest factor, accounting for 80 percent. In the second, the division of the market is more elastic--IBM accounts for 63 percent. CII-Honeywell-Bull, Facom of Brazil and Digital Equipment are also present, playing a less prominent role. For some years the other six have sold no equipment in Brazil.

Limited by the straitjacket of government restrictions, the producers of large or very large systems are constantly criticizing the market reserve system. After all, they argue, initially the reserve may be a good thing for the national producer. In the medium or long range, however, it is a threat to operations overall, because the limiting of the market prevents the introduction of more advanced technology.

Slowdown Affects Minicomputers

Although the total invoiced by the industry has increased significantly, physical sales of minicomputers declined last year, with the placement of about 800 systems as compared to 820 in 1980. It is often said that the computer sector develops well in periods of crisis, because it offers a product which makes it possible to reduce enterprise costs. But the effects of the recession in 1981 somewhat slowed the development of the minicomputer industry, interrupting the excellent results achieved in 1979 and 1980.

As Marco Antonio Filippi, national director of marketing for Labo Electronics, SA, explains, the needs continued to increase but demand was limited by the uncertainty of businessmen, their reluctance to make substantial investments during a period of shrinkage, when after all credit costs were extremely high.

"There was not really any stagnation, but rather reduced acceleration," he adds, stressing however that by the end of the year, recovery, which is continuing at an increasing rate, with considerable business expansion, had begun. In 1982, Filippi expects that the market will absorb a total of 900 to 920 minicomputers, at a minimum price of 8.5 million cruzeiros per unit, in addition to systems expansions (purchase of more peripheral equipment, such as disk units, printers, etc.), representing for Labo, for example, 27 percent of the invoice total. This total, moreover, has already increased this year by more than 100 percent in comparison to the same period last year, far from the 550 percent growth in 1979, but sufficient to give rise to "critical optimism," as Filippi, who is wary of euphoria and an advocate of caution, calls it.

To achieve this increase, Labo also relied on sales of its microcomputer, which it brought out in October of last year. "However, unlike some enterprises, we are being very careful to see that sales of the microcomputer do not interfere with the minicomputer sector. For example we are trying to place the microcomputer as a supplement to the processing capacity our client already has, rather than as a substitute, which it really is not."

Caution as to Personal Computers

Within a short time it will be possible to purchase a personal microcomputer at about 50,000 cruzeiros (about U. S. $295 at today's prices). Obviously, the components will be limited, including a keyboard, which can be adapted to a readout screen and a recording device, and its use will probably be limited to the development of some electronic games.

This prospect offered by some industrial companies drafting plans in this area is important, in view of the price shown today in the magazines for a personal computer--about 500,000 cruzeiros at a minimum, which makes it a very expensive toy. But it should not be expected that a Brazilian housewife will be able shortly to purchase a domestic microcomputer to store her pastry recipes, as many North American women are already doing. It is also unlikely that a child will receive such a machine as a Christmas present to launch him into the computer era.

The personal computer market is still far from a boom in Brazil. There are even those who believe that its introduction into this country was premature and is doomed to failure. Dismac was the first to venture into this market a little less than a year ago, with an offer of three models: a basic machine, including video screen, keyboard and recording equipment; an intermediary model, to which was added a printer with a capacity of 100 characters per second; and a more sophisticated model, including two diskettes for data storage.

This enterprise has already sold about 1500 units, at a price of 460,000 cruzeiros for the basic model, but acknowledges that it is not yet making a profit and that the market, which was limited until a short time ago to a few hundred smuggled units, mainly Apple computers, has barely emerged from the apprenticeship stage. "We are still exploring the market," says Renato Malato, recalling however that the competitors have not yet become a threat: Digital and Phenix are only offering a central unit (keyboard for hookup to any screening system) without any additional equipment.

If Dismac is out in front, this is due solely to its geographic location, since its headquarters are in the Manaus Free Zone, such that it does not need the authorization of the SEI, which only approved some proposals in the personal microcomputer sector a little more than a month ago, on the basis of criteria regarded as very strict. Of the 33 proposals submitted by 28 companies, only four--one submitted by Computec, one from Digibyte (formerly Microdata) and two from Splice--won approval. The use of domestic technology and demonstration of technical, financial and manpower resources for the implementation of the projects were basic conditions.

No Haste

Enterprises invited by the SEI itself to submit their bids saw their proposals rejected, as that submitted by Labo was because it did not provide a prototype. "We drafted the proposal speedily, at the request of SEI, establishing a priority which was not ours. Following this rejection, we will cease to be in a hurry to enter this sector. It is not that we are uninterested, but it would require structural changes in the enterprise," Marco Antonio Felippi explains. In his view, it is necessary to proceed with deliberation in the personal microcomputer sector, and an entirely different marketing approach should be developed. After all, this is an impulse purchase, like any other type of consumer goods.

The Polymax proposal was also rejected, but it has now prepared a prototype in order to obtain approval, and plans to launch three models: the hobby version, with a 32 kb memory, with which one can design certain games and "mini-programs" and learn a language, BASIC, at a cost of 45,000 cruzeiros; the home model, with somewhat larger capacity, allowing limited personal accounting programs, at 340,000 cruzeiros; and the personal computer, capable of certain management and calculation procedures. Equipped with a printer, this third model should be offered to the consumer at between 450,000 and 800,000 cruzeiros. Confident of SEI approval, Polymax is already preparing to offer this product on some other South American markets as well, to which it plans to export a large part of its production.

Traditional Equipment Still Possible

While a number of enterprises specializing in office machines are seeking to make their products more sophisticated along computer lines, Facit has been making a profit on traditional products. This new majority orientation perhaps explains IBM's silence about the recent aggressive advertising campaign with which Facit attacked the electric typewriter market--of which it has a tiny 3 percent share--with reduced prices. This investment in advertising, representing about 6 percent of the sales whereas the usual figure is about 2 percent, is only one of the tactics being used by Facit in the hope of winning 35 percent of the manual and electric typewriter market in 1983, and 25 percent of the electronic calculator market.

Today, according to Lars Jarnryd, managing director of Facit, Brazil is the second largest producer of typewriters, with a total of 600,000 units worth U. S. $150 million in 1962, of which 230,000 units were sold on the domestic market. Where electronic calculators are concerned, Brazil is the third largest world market, producing 350,000 units per year worth U. S. $80 million for domestic consumption. This leading position, in Jarnryd's opinion, is due to the much criticized Brazilian bureaucracy and the very limited intervention by Minister Helio Beltrao, mainly in the state of Sao Paulo, which alone constitutes the largest market in Latin America.

Facit, however, which is a Swedish firm in the Electrolux group, had only a small portion of this promising market. That factor, linked with a complex of internal problems, required that the company develop a new policy, which is beginning to yield good results. "Our share of the manual typewriter market increased from 15 to 25 percent, our share of the electrical typewriter market from 3 to 35 percent, and and our share of calculating machines from 5 to 15 percent. We reduced the management in seven branches from a staff of 430 to 85, not counting the 1,100 factory employees. Sales expenditures declined by 14 percent, with a reduction in the number of middlemen (with 6,000 clients) from 1,000 to 400. And sales have increased by 25 percent overall," Jarnryd points out in commenting on the plans initiated in June of last year and the development up to March.

The enterprise had to attack on various fronts in order to make of itself a success story: it had to eliminate competition between its own branches and the middlemen; reduce sales expenditures by cutting distribution costs; operate with reduced financial expenditures, limiting discounts for the final purchaser; and safeguarding itself against export difficulties because of world overproduction and the 30 percent drop in international prices.

Within this framework, the new policy called for priority for the domestic market, improvement in product quality, increased technical aid and operation at accessible prices. Improvement of the company image and reduction of costs for the sales, administrative and distribution systems completed the strategy.

Product quality, according to Lars Jarnryd, is now a fact, at an index of 96 percent of the international parameters, with a system of permanent technical inspection. In addition, within the framework of the 3,000 parts and 200 machine variants, with imports accounting for 14 percent for electric typewriters and 4 percent for manual typewriters, it was possible, by means of a review of materials and suppliers, to lower costs by 9 percent.

The tactic of improving the company image was also successful: sales increased 600 percent with the announcement that the price of the Facit electric typewriter is half the cost of the IBM model. "This was possible because with the price liberation effected by the CIP [Interministerial Price Council], our competitor increased prices once and we held the line for some months, in addition to the fact that our costs are 20 percent lower," Lars Jarnryd explained.

The major internal alteration involved reducing sales, administrative and distribution costs. The seven branches and technical aid facilities were sold to the middlemen or managers. As they lacked capital, they were given credit for the first order and loans for wage payments.

Other incentives were provided to convert sales promoters into businessmen, with the payment of 6 months' wages. In addition to this, discounts of up to 35 percent on orders for payment within 105 days were established, and for orders accompanied by checks, in other words cash sales--25 percent of the sales come within this category--Facit pays "overnight" compensation plus 1.5 percent. As a result, middlemen have invoiced between 20 million and 100 million cruzeiros per month.

	Brazilian Market					
	Manual Typewriters %		**Electric Typewriters %**		**Electronic Calculators %**	
	1981	**1982**	**1981**	**1982**	**1981**	**1982**
Olivetti	75	65	55	50	30	30
IBM	—.—	—.—	42	25	—.—	—.—
Remington	5	5	—.—	—.—	10	5
Sharp	—.—	—.—	—.—	—.—	35	30
Dismac	—.—	—.—	—.—	—.—	15	10
Facit	15	25	3	25	5	15
Other	5	5	—.—	—.—	5	5

Source: Facit

Microcomputer Boom Subsides

Last year, the euphoria created by the boom in the sales of microcomputers on the Brazilian market gave rise to the illusion that this offering made all others obsolete. It is even noteworthy that some minicomputer industries hastily included a microcomputer model in their production lines out of fear of losing customers. If this happened, the cases were few, because just as minicomputers did not force larger ones off the market, it is not true that microcomputers can replace more powerful models.

The whole issue comes down to adapting the system to the processing capacity the consumer needs. Those who need a minicomputer structure and who purchase a microcomputer will have to expand their systems to such an extent that they will put an end to another deception--the belief that a microcomputer costs a microprice. Depending on its construction and the peripheral equipment needed, the microcomputer can in the end cost nearly as much as a minicomputer, in terms of capacity, but also in terms of price range, which runs from the 2 to 4.5 million cruzeiros the basic machinery costs today to something like 8 million cruzeiros.

Perhaps the rapid growth in the microcomputer market suggests the impression that it has invaded the other two sectors, whereas in reality its sales are expanding in another direction, toward the amplification of systems already in operation, small-scale industrial businesses and shops, those in the liberal professions and even domestic use.

Renato Malato, national systems sales manager for Dismac Industrial, SA (an enterprise which produces three commercial microcomputer models in the Manaus Free Zone--the most sophisticated has a four megabyte capacity and is selling at 80 to 100 units per month), estimates that the market is 400 to 500 units per month, apart from the demand which the industry is not in a position to satisfy.

And, unlike some of its competitors--Polymax, Scopus and Prologica being the principal ones--he believes that, as a function of the fact that this demand is very high, it is no longer necessary "to promote" sales. "The microcomputer has become such a widespread item that we do not need to waste more time selling the idea. All the manufacturers need to do is wait for the orders," he says. But Sergio P. Perrenoud, manager of the technical marketing department of Polymax Systems and Peripheral Goods, Ltd., believes that the main goal should still be to educate customers.

Duplication

Polymax also has more modest plans for the market volume, estimated at 300 units per month, which does not mean that its expectations are limited. After all, this enterprise has seen growth at least double that of the data sector overall last year. Sales have increased 50 percent, yielding invoices totaling 1.785 billion cruzeiros. A further 50 percent expansion over the same period last year is expected for the first 6 months of 1982, but invoicing had already tripled in the first quarter as compared to the same 3 months in 1981, with a total of 505,180,000 cruzeiros as compared to 173,520,000. For the year as a whole, the estimated invoice total is 5,150,000,000 cruzeiros.

Market expansion led Polymax to plan to double the production capacity of its factory in Rio Grande do Sul, from 50 to 100 units per month--currently it is producing about 60--and to invest in a vertical structure. It will shortly begin producing the printer it has heretofore been importing, in addition to that with a slower speed for use with domestic microcomputers which it is already turning out. A microcomputer with a 10 megabyte capacity and a word processor are other products made by the enterprise, which is preparing to offer a "multiuser" machine with a capacity for eight data entry units, and a model in the personal microcomputer sector.

Sergio Perrenoud warns however that expansion must be very carefully planned, because the industrial companies in this sector are not yet in a position to work with a macrostructure: any company unable to pay its staff if it has one month without production it can bill will be unable to grow very rapidly.

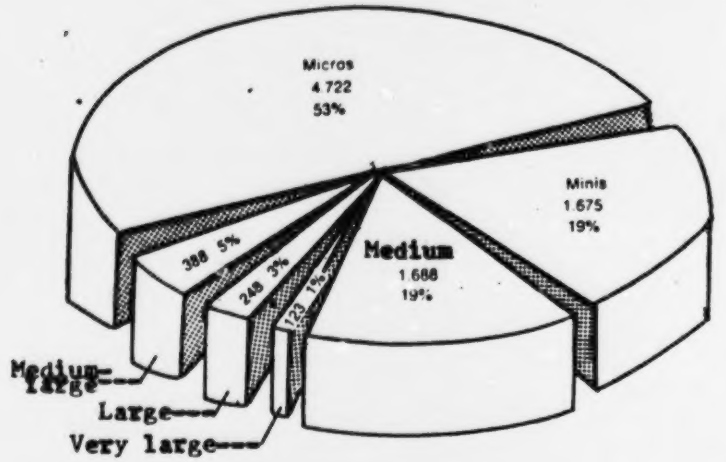
On the other hand, the Polymax manager does not fear competition. The expansion of demand makes it possible for all to find a place in the market, even the smuggled goods and the minicomputer industries venturing into the sector, whose competition he regards as healthy. But he warns that in one year, the rising level of consumer information will be such that a natural selection will be made among the suppliers, resulting in the survival of only a few more than half of the enterprises functioning in the microcomputer sector today. "Obviously, the firm with the most experience will have the most solid position on the market."

The Market

Labo is another of the firms certain of its position in the microcomputer sector, thanks to its careful marketing: a large part of its sales involves the expansion of the processing capacity of its minicomputer clients, also representing a significant consumer sector for other microcomputer producers. The decentralization of management and the better man-machine identification, apart from the vast applied program libraries offered, have been the other sales features offered with commercial microcomputers. But there is also another potential market which cannot be overlooked--replacement of the some 20,000 accounting machines and 20,000 electromechanical billing machines currently in use in the offices in this country.

Moreover, the old polemic argument between Dismac--which invoiced systems worth about 280 million cruzeiros in 1981--and the other manufacturers concerning the incentives provided to Dismac thanks to its location in the Manaus Free Zone now appear to be in the gradual process of being overcome. And Dismac itself, which only got into the systems sector 2 years ago, explains why. If on the one hand it does not have to obtain approval from the SEI for its projects, being subject solely to the norms of the SUFRAMA [Superintendency of the Manaus Free Trade Zone], which provide incentives exempting it from the income tax and allowing the import of finished products, on the other hand, its transportation costs and problems in contracting for skilled manpower--"nonexistent in the north"--have in the end made its products as expensive as those of its competitors in the south, who are subject to limitations on their imports of components and must pay taxes on them.

Machines Installed in the 1970-1980 Period (by category)



Source: SEI

5157
CSO: 5500/2276

BRIEFS

JAMINTEL DEVELOPMENT PROGRAM--KINGSTON, Wed., (Cana)--THE State-owned international telecommunications firm, Jamintel, is spending $70 million on a six-year development programme ending in 1987, Jamaica's Public Utilities Minister, Pearnel Charles, has said. Jamaica has majority shares in Jamintel (Jamaica International Telecommunications), which was formerly owned by the British Cable and Wireless. The Minister said the programme called for the expansion and modification of Jamintel's satellite station, its international telephone exchange and telegraph switching systems. A contract for a new telephone exchange for the company, with 1,200 circuits, as well as for an addition to the Jamintel centre in Kingston, would be signed within the next fortnight, the Minister said. [Text] [Port-of-Spain TRINIDAD GUARDIAN in English 17 Jun 82 p 5]

CSO: 5500/7550

MINISTRY OF COMMUNICATIONS RENEWING, EXPANDING FACILITIES

Kabul KABUL NEW TIMES in English 16, 17, 19 Jun 82

[Part II, 16 Jun 82 p 2]

[Text] For the purpose of launching certain other projects provision of technical equipments was also included in the 1360 programmes and performances of development activities. Apart from this, installation of wireless stations (CPBV) in some provinces for the purpose of maintaining telephone links is among the activities accomplished in 1360.

B. In the section of telecommunication Services:

In addition to the maintenance and supervision and activation of stations and provision of grounds for the offering of better telephone, telegraph and telex services, the telecommunication services have performed the following tasks, for:

1. For a number of subscribers telex lines for seven units have been extended and the telex machines were installed.

2. Seventeen slotting telephone booths were installed in several parts of the city for public use.

3. The telephone link outside the 10th region of the capital took place in 1360.

4. The telegraphic link outside the seventh region of the capital took place in the course of 1360 (1981-82).

5. Telegraphs were installed in the centres of four terminals and, making use of wireless stations telegraphic activities, continued through teleprinters.

6. Changes in names were introduced in 400 telephone lines.

7. As many as 489 new telephone lines were extended for individual or state users of telephone.

8. As many as 223 telephone units were moved from their places to new addresses on the request of state organisations and individuals.

9. A total of 150 secretariate telephones were installed in the state organisations offices.

10. A total 136 local battery and central battery. switchboards were repaired and reactivated.

11. Five PBX and central battery stations in large sizes were installed in the state organisation offices.

Considering the volume of telephone, telegraph and telex communications in side and outside the country, the revenues due to be collected from this section only amounts to Afs 178,977,539.

C. Section of technical services, radio television:

The technical section of Radio-television, which has the responsibility of disseminating the programmes of radio and television and maintaining continuous connections through telephone and wireless telegraph with the internal and international circuits from the technical point of view, has performed the following activities in the year 1360 (1981-82):

1—Participation in the task of preliminary survey of the 1,000 kilowat medium wave station of the radio with the cooperation of experts from the Soviet Union.

2. Technical cooperation in the land station project of artificial satellite, the Shamshad, the installation of which was accomplished

3. To strengthen the broby the Soviet experts. adcasts of Radio Afghanistan in the Moqor district and the section of local broadcasts, a unit of 7.5 kilowatt transmitter of the type PB7 for the medium wave was installed in that district.

4. Four wireless stations of 300 watts each equipped with telegraph equipments and radio terminal were installed in the Herat, Kandahar and Kunduz provinces. With the installation of these stations, communications through teleprinter as well as direct telephone connections of the subscribers of telephone were made possible in a better way.

5. Twenty units of 30-watt wireless stations were installed in the related districts of the Kabul, Logar, Kapisa, Baghlan, Kunduz, Samangan, Nimroz, Herat, Ghor and Badghis provinces and the Moqor district

6. A great number of television sets were repaired in the television workshop. This includes 1,175 television sets which were serviced and repaired without any charge as they were guaranteed and repairing of many other television sets which brought a revenue of Afs 589,768.

D. Postal services section:

With the establishment of postal centres in the cities and districts and by maintaining relations and postal exchanges with the foreign countries, the ministry has performed the following tasks:

[Part III, 17 Jun 82 p 2]

[Text]

1. Distribution of 238,386 foreign and local items of correspondence.

2. Sending of 1,324,985 items of correspondence and letters outside the country and inside the country.

3. Distribution of 55,079 in-coming in and outgoing parcels.

4. Transmission of 587 transit bags from Afghanistan to the neighbouring countries, of a total weight of 13,118 kgs.

5. Issuance of 14 postal stamps on various occasions.

6. Printing of 10 kinds of illustrated envelopes and five kinds of illustrated postcards.

During the current year, the department of posts of the ministry initiated short term courses of six weeks to train its related personnel in which hundreds of postal officials were trained.

The sum total of income from the postal services in the current year amounts to Afs 55,053,838.

Measures have been taken to obtaining the share of Afghanistan due to the accomplishment of postal and telecommunication services through the international liaison department of the the ministry and so far 930,953 dollars have been obtained.

Reciprocally, for the accomplishment of postal and telecommunication services outside the country, Afghanistan has paid to the international communication organisations the equivalent of $26,198 dollars in the current year.

The income of the ministry in 1360 (1981-82) was approximately Afs 290,000,000 due, out of which Afs. 271,049,297 have been obtained and included in the general state revenue. This figure shows an increase of Afs 1,344,569 over the income of 1359 (1980-81), which was Afs 269,704,728.

Other activities:

1. It is planned to build the Mazar-Hairatan channel project. The plans and blueprints are ready.

2. The automatic telephone project for Khairkhana Mena is planned to be completed by the end of the current year.

3. The automatic telephone project for Shahri Naw and Karte Char, including its network, is planned to be restarted.

4. The automatic telephone project for the micro region is planned to complete by the end of the current year.

5. In connection with the micro-wave project for Kabul-Mazar, it is planned that steps will be taken in the 1361 concerning the survey of roads and extension of transmission lines of electricity. Also the construction work of required buildings in Kabul and Puli Khumri will continue.

6. It is planned that a portion of the project for ministry building will be completed.

7. The Mazar-Sheberghan-Maimana-Taluqan, Faizabad channel is under consideration and the construction work of the channel buildings in the Jauzjan, and Badakhshan provinces and the Andkhoi district will continue and, in case of suitable working conditions, the work of installation of the channel stations in the cities of Maimana, Andkhoi Sheberghan, Faizabad, Taluqan, Kunduz and Puli-Khumri will begin.

8. Postal development project.

It is planned that, in 1361 (1982-83), a portion of the construction work of post offices in the Kabul, Balkh and Herat provinces will be carried out.

9. The channel system project of Herat, Kushk and Torghondi:

The work of the extension of channel lines between Herat, Kushk and Torghondi is planned to commence for a distance of 130 kms, provided the means and equipments arrived from the Soviet Union.

10. The project of Shamshad station—the remaining part of works of this station is planned to be completed and necessary measures will be taken for the construction of administrative building of the project.

11. Small automatic stations: It is planned that, by making use of the anticipated funds, steps will be taken in connection with the construction of automatic telephone station of Pule Khumri and also the maintenance work of the automatic stations in the related provinces. Making use of the foreign currency funds, the remaining part of tools and equipments will be provided.

12. The project of the CP-B7 medium wave station in Farah, Moqor, Bamian, Qalat, Lashkargah, Zaranj and Tirinkot: It is planned that radio stations will be installed in the provinces and districts.

13. Television repair workshop: The means, equipments and tools for this workshop are planned to be provided soon.

14. The project of a 1,000 kw medium wave station: Steps will be taken to make use of the anticipated funds to purchase the land required for the construction of technical and administrative building in Pule Charkhi. The wages of the technical work of the project will be paid from the foreign currency funds.

15. The project of the high frequency medium wave station at Kabul: It is planned that by making use of the foreign currency funds the work on modification of the required building in Pule Charkhi will be fulfilled. The wages of technical work of the project will be paid and the necessary tools and equipments will be provided.

16. The training centre of communications: The required plans of the centre are planned to be provided.

The Department of Posts:

To meet the need of our compatriots the postal department of the ministry plans to accomplish the following tasks:

[Part IV, 19 Jun 82 p 2]

[Text]

1. To improve the task of distribution, exchange and safe transmission of the different kinds of postal correspondences, the postal department of the ministry plans to create a well-equipped transport system within the framework of its organisation in 1361 (1982-83).

Several groups were sent to the provinces to fulfill their assigned tasks in as a short period as possible and the shortage of technical personnel was planned to be compensated and completed in a period of one year or a little over a year.

CTR stations in the capital and provinces:

In the capital and the provinces where CTR stations are not installed, such stations will be installed and the work will continue in the places where it has already begun.

Secretariat units will be installed in various organisations upon their request. The new units will arrive soon.

The repair of switchboards and telephone units which have stopped working due to the excessive use. This includes fixing and replacing new spare parts instead of the faulty ones.

Repair and extension of new telex lines on the basis of the requests made by the present subscribers and consideration of requests of new subscribers.

Installation of public slotting telephone booths in different parts of the Kabul city and in the provinces where they have automatic telephone stations.

Preservation and maintenance of public slotting telephones, telex machines and their timely repair.

In the field of Radio Television:

1. The plan for installation of stations in the Zabul and Helmand provinces have already started and the work on them will soon be completed.

2. The plan for installation of two more stations in the provinces of Nimroz and Farah will follow the completion of the installation work of the earlier mentioned provinces.

3. The survey work of the site for installation of radio stations in the provinces of Ghazni, Khost, Faryab will soon be started by the technical personnel.

4. The survey work and the plan for installation of three supporting stations in the provinces of Kapisa, Logar, and Maidan is also under consideration and their preparatory work will possibly begin soon.

5. The charting of the plan of a transmitting television station of Secam system is under consideration and its preparatory work will soon begin.

6. Installation and activisation of three transport-vehicles in Kabul, provided the equipments arrived from the Soviet Union.

In the field of television repair workshop:

It is planned that, in the current year, beside the central workshop, another workshop will also be established.

In the field of wireless communications:

The plan of installation and activisation of eighty wireless stations in the provinces is under consideration and in addition to that the work of repairing all the radio communications stations, propagation stations and generators are also planned.

CSO: 5500/5346

RADIO, TV PROJECTS REPORTED

GF101241 Dubayy KAHLEEJ TIMES in English 10 Jul 82 p 3

[Excerpt] The Ministry of Information and Culture is implementing projects to set up radio stations in al-Shariqah and Fujairah and a television center at Ras al Khaimah.

The projects are part of the ministry's development programme being executed at a cost of DH 322 million. Of the total, projects costing DH 262 million, are being implemented by the Ministry of Information directly and projects worth DH 60 million have been assigned to the Ministry of Works.

The Ministry of Information has allocated DH 50 million for its development schemes during the current year.

The proposed broadcasting stations at al-Shariqah and Fujairah will cost DH 13 million while the new television center at Ras al Khaimah will be set up at a cost of DH 26 million.

A medium-wave transmitting station at Sa'diyat will also be set up at a cost of DH 14.5 million.

Another project for modernising the development laboratory in Abu Dhabi which will cost DH 4 million.

Other development projects of the ministry include extension of Abu Dhabi TV building costing DH 25 million and a transmission centre of the news agency at al Maqta' costing DH 7 million.

According to the report issued by the Department of Annual Programmes and Follow-up at the Ministry of Planning, among the projects executed by the Ministry of Information directly are development of radio transmission rooms and studios costing DH 10 million, film production unit costing DH 20 million, furnishing of al-Shariqah Cultural Centre laboratory costing DH 12 million, Abu Dhabi TV Channel II scheme costing DH 14 million, building of video tapes control department costing DH 5 million, development of outdoor transmission vehicle, costing DH 2 million, and installation of phone sets for the outdoor transmission vehicles costing DH 2.5 million dirhams.

Besides these projects, the Ministry of Public Works and Housing is executing a number of projects for the Ministry of Information at a cost of DH 60 million.

These included construction of buildings for six cultural centres at Dubai, Ras al Khaimah, Bid'zayed, Umm al Qaiwain and Fujairah, costing DH 40 million and building project for the local news agency costing DH 3.3 million.

CSO: 5500/4729

BRIEFS

LUBANGO-LUANDA AUTOMATIC COMMUNICATIONS--The National Telecommunications Firm (ENATEL) has announced that automatic telephone service has recently been put into operation between Luanda and Lubango, capital of Huila Province. To make a telephone call, people calling from Luanda should dial 0069 and then the desired number; those who want to contact the country's capital from Lubango must dial 02 before dialing the number of the desired party. Not having any way to differentiate between local and long-distance calls, ENATEL is telling its subscribers that, if they want that information, they must make the call through the service operator of the city telephone exchange involved. It will be remembered that the country's capital already has automatic connections with the provinces of Cabinda, Huambo and Benguela, and additional connections are planned with other provinces with the aim of installing a modern and efficient system throughout the country. [Text] [Luanda JORNAL DE ANGOLA in Portuguese 17 Jun 82 p 2] 8568

AUTOMATIC EXCHANGE--Uige--An automatic telephone exchange, combining the microwave and cross-country systems, is being installed in this city by the Portuguese firm Teixeira Duarte, according to information released to ANGOP [ANGOLAN NEWS AGENCY] by Garcia Vu, department head of the National Telecommunications Firm (ENATEL). This facility will provide internal and external connection with Uige Province. According to clarifications from that provincial official, the assembly work, which was started last year, is being assured by 10 Portuguese cooperants. Garcia Vu also said that of 11 CTT [Posts, Telegraph and Telephone] stations set up in the province, only 5 are presently operating with the sale of stamps, the receipt and delivery of mail, parcel post shipments, and the sending and receiving of telegraph messages. [Text] [Luanda JORNAL DE ANGOLA in Portuguese 19 Jun 82 p 4] 8568

CSO: 5500/5843

BRIEFS

SATELLITE PHONE LINK--Zimbabwe could have an earth satellite station in operation by the mid-80s, the Deputy Minister of Information, Posts and Telecommunications, Dr Naomi Nhiwatiwa said yesterday. She was opening a five-day Southern African sub-regional seminar organised by the International Telecommunications Satellite Organisation (Intelsat) in Harare. She said: "Although Zimbabwe does not yet have an earth satellite there is a pressing need in this country to make provisions for our own earth station to overcome our present dependence on South Africa for communication links with the rest of the world." Dr Nhiwatiwa said: "Subject to reaching satisfactory financial arrangements it is hoped Zimbabwe will have an earth satellite station in operation by the mid-80s." Plans were also underway to build an international "gateway telephone exchange at Gweru scheduled for completion in 1984. The deputy minister said: "The completion of these two projects will make it possible for Zimbabwean subscribers to dial directly to most parts of the world." [Text] [Harare THE HERALD in English 29 Jun 82 p 1]

CSO: 5500/5860

FRANCE

NATIONAL ASSEMBLY ADOPTS PROVISIONS OF AUDIOVISUAL LAW

More Export Desired

Paris LE MONDE in French 9-10 May 82 p 4

[Article by Laurent Zecchini: "New Company To Market TV Programs in France and Abroad"]

[Text] On Friday 7 May, the National Assembly continued its debate on the articles of the audiovisual communications bill.

Marketing of Audiovisual Programs

Article 56 provides for the creation of a new company to market audiovisual programs. This company will also contribute to the cultural effort abroad and, according to the government's text, "It can participate in joint-production agreements."

Mr Marette (RPR [Rally for the Republic], Paris) expressed satisfaction that the company would have no monopoly and that the programming companies (TF 1, Antenne 2 and FR 3) can continue negotiating the sale of their products abroad. Speaking of it as a "new bureaucratic company," he felt it was more urgent to start making films and programs that are of more interest to foreign publics. Mr Toubon (RPR, Paris) agreed that, to date, French TV has not succeeded in selling enough of its programs abroad. An organization such as this company, he felt, could make for "a more sensible policy," but "it would be waylaid by ineffectiveness owing to its cumbersomeness and its remoteness from the creative ambit." The government, he asserted, has chosen not to choose, since the existing broadcast services and the new organization "will divide up the work" (of marketing).

Mr Hage (PCF [French Communist Party], Nord) attached importance to the fact that the company, while benefiting from royalties, will be financing joint productions with public funds. This, he said, "brings us right back to an economy of the marketplace." Mr Madelin (UDF [French Democratic Union], Ille-et-Vilaine) held that cultural promotion is the province of the Ministry of External Relations. Furthermore, "The users should not be made to finance broadcasts aimed abroad." Lastly, "The joint producers should be the programmers." The new company, he asserted, "will bring constant conflicts" (with the program companies).

Mr Fillioud, minister of communication, stated that the aim of the government is to ensure that French audiovisual production "is exported more than it has been heretofore." "Lightly structured as it is," the company will bring in money, which will be reinvested and will enable the development of creativeness." In any case, "A single authority is needed." Mr Marette pointed out that the sales of programs depend in particular upon showings of participation, which are difficult for a state organization. Speaking of the current system, Mr Madelin pointed out that in the United States, French productions are immediately labeled "state television," "which is not exactly an asset."

Mr Schreiner (PS [Socialist Party], Yvelines), rapporteur of the special committee, recalled that the activity of the new company will parallel that of the marketing services of the program companies, after which the Assembly voted down two amendments by the RPR and UDF groups that would have eliminated the article. It then adopted an amendment by the government stipulating that the company will market "abroad the audiovisual works and documentaries with respect to which the companies and public establishments provided for under Title III(1) shall cede to it the royalties under the articles and conditions of their charters." The deputies then threw out an amendment introduced by the UDF group that would have prohibited the new company from entering into any joint production agreements.

Mr Fillioud next introduced an amendment stipulating that the company can also participate in "marketing agreements in France and abroad." Mr d'Aubert (UDF, Mayenne) objected that this amendment "changes completely the business orientation" of this company. He asserted that in the movie industry "that conveys nothing: Is the company going to become a distributor or an operator? Is it going to buy up movie houses that are in trouble?" In his view, what is being sought, in the guise of an amendment,is "to nationalize the distributional and operational activities of the film industry." Mr Madelin added that the independent enterprises will be hard put to cope with competition from an enterprise in the public sector. He proposed, by way of an amendment, to specify that this marketing provision will not concern cinematic works. The rapporteur acknowledged that "The problem is real."

Mr Fillioud pointed out that it is not a question of distribution but rather one of marketing. Mr Marcus (RPR, Paris) was not convinced: "Television will annihilate the movies instead of being their vehicle," he asserted. The government's amendment was adopted. Mr Toubon denounced it as "a masked nationalization" of the distribution sector. Article 56, thus modified, was passed by a vote of 280 to 161, the communist group having abstained.

---

(1) This includes all of the companies comprising the public radio and television broadcasting service: The Public Radio Broadcast Establishment (formerly the TDF), National Radio Broadcast Company (Radio-France), National Program Companies (TF 1 and Antenne 2) National Company for Regional Programming (FR 3), National Radio and Television Company for Overseas Services, National Productions Company (former SFP), INCA [National Audiovisual Communications Institute] (former INA), Regional Radio Broadcast Companies, Regional Television Broadcast Companies, National Company for Radio Broadcasts Abroad (RFI [Radio-France Internationale]).

SOFIRAD

Article 57, as drafted by the Commission, provides that the capital of the new company "cannot be held by other than the state, SOFIRAD [Radio Broadcast Financing Company], and the national companies and public establishments concerned under Title III." It stipulates that the shares are registered securities. (The government bill would therefore have the effect of compelling SOFIRAD to participate in the capitalization. As the rapporteur pointed out, this obligation cannot be imposed on a company organized under private law, like SOFIRAD.)

For the first time--Mr Toubon said--SOFIRAD is being mentioned in the wording of a law. "'Legalizing' it in this way," he added, "amounts to giving the public sector a determinative role in audiovisual system." Mr Marcus argued that the state has heretofore exercised a "de facto control, not a legal one, over SOFIRAD, adding: "This will pose problems in the realm of international law in countries where peripheral stations are installed that SOFIRAD controls." Mr d'Aubert supported this view, saying, "If SOFIRAD has been able to conclude agreements with the Moroccan, African and Brazilian television networks, it is precisely because it did not bear the label of a state-run company." "Do you think," he added, "the Federal Communications Commission in the United States will agree to allow American cables to be used for transmissions by a state-owned company?"

Acknowledging that the juridical arguments thus advanced "are not without merit," the minister of communication proposed a sub-amendment--orally--designed to replace the reference to SOFIRAD with a reference to "the companies organized under private law in which the state holds a majority ownership." Mr d'Aubert expressed his concern: Will this new wording not create new claimants to rights, such as the Havas Agency? The wording of Article 57 as proposed by the Commission and as sub-amended by the government was then adopted.

Funding

Article 58, dealing with the composition of the board of directors of the new company, was adopted, after which the Assembly examined Article 59. This article stipulates that the organizations created by Title III are to be funded "by specific resources to be authorized, to the extent needed, by the budget appropriation law." In addition, each organization "will have the use of the revenues of all kinds generated by its activities, in particular by the services it renders to government administrations."

The opposition assailed the cost of the audiovisual reform. Mr Marcus underscored that the president of the Republic has committed himself to ensuring there will be no increase in state revenues unless new services are created. This will require, he added, bringing publicity to bear, and one can then expect the opening of an offensive against the regional press. "What we know," said Mr Marette, pressing the point, "is that this will all be paid for by revenues from tax levies and from advertising. But what we don't know is how much and how. All we know is that there will be a vast hole!" He added: "Just in administrators, members of the high authority, assistants, inspectors, presidents, and managements of national companies, alone, we are talking in terms of some 1,300 persons who will be installed in offices, will be having expense accounts..." Mr Madelin referred to "2.5 billion francs as the low estimate, but more likely 4.5 to 5 billion francs."

Mr Toubon argued for the RPR that funding should be limited to revenues from levies and commercial advertising on the channels where it is specifically authorized. Mr d'Aubert pointed out that Mr Jerome Clement, technical adviser on the staff of the prime minister, has announced the institution of a tax on video tape recorders. In the view of Mr Hage (PCF), what needs to be addressed above all is "the mess and the bureaucracy that is to be generated by the splitting up of the ORTF [Office of French Broadcasting and Television]"

Mr Madelin argued for an amendment that would eliminate Article 59. "To eliminate funding of the public service is to eliminate the public service itself," Mr Fillioud pointed out. Coming from the opposition, he added, it is "a clear and outright admission of fact!" The minister of communication took exception to the "fantastical" figures that had been put forth and asserted that 1 additional hour of regional television per day will cost 220 million francs. The amendment to eliminate the article was voted down. Mr Toubon gave a rundown of figures: The regional television companies, he stated, will cost 2.8 billion francs. In all, close to 3 billion francs will have to be found, and, in 1983, "the cost of the public service will come to 9.3 billion francs. If you maintain the present ceiling on advertising, tax revenues will have to be increased by 50 percent; if you increase tax revenues, you will have to increase advertising funding by 120 percent."

Currently, Mr d'Aubert argued, "35 minutes of regional television cost 700 million francs; How can 1 additional hour cost only 220 million francs?"

Article 59 was adopted, and continuation of the debate was set for Monday morning 10 May.

TV Independent of Government

Paris LE MONDE in French 18 May 82 p 8

[Article by Laurent Zecchini: "The Constraints of Freedom"]

> [Excerpts] "Audiovisual communication is free." It is inscribed on the pediment of the law. How, then, can there be any doubt of it...? "Too free," say the communist deputies to justify their abstention. It is a "law of freedom," affirmed Mr Estier (PS [Socialist Party]). "It is worse than the previous one," asserted Mr Madelin (UDF [French Democratic Union]). "It gives

the Right an opportunity to take over radio and television "to mobilize them against change," responded Mr Hage (PCF) [French Communist Party]). Who is going to vote for it? "Those who believe in freedom and in change," opined Mr Fillioud. "Farewell to freedom!" concluded, tragically, Mr Toubon (RPR [Rally for the Republic]). Quiveringly, at the opening of the debate on 26 April, the minister of communication had voiced a "Welcome to freedom!"

Dawn or dusk? Antoine de Saint-Exupery once said it is the reasonable constraints that give form to freedom. This is precisely the philosophy of the bill. Free, in that it replaces a situation of complete dependence. But not altogether free, in that too many of its provisions "organize" that freedom. The audiovisual communications law accords new "niches" of freedom. Strictly limited ones. But just what freedom is it that is being sought? The one advocated by the UDF is seductive, but others see in it too many private and political interests that would well up behind it. That of the communists is too chill and vague: For them, the bill is too close to the law of 1974 and at the same time too favorable to the opposition. The freedom of this one, Mr Dumas (PS) pointed out, "is a road lined with the corpses of the weak annihilated by the strong." The former freedom, recalled Mr Lang, minister of culture, was that exercised by three large private groups to monopolize the entire film industry.

Before, the forbidden was the rule. Now, the freedom to communicate will be "authorized." Bit by bit. Private local radio stations will exist. Without advertising. Freedom of radio and television personnel to strike? It is total. Subject to being tapped to provide the needed "minimum service." Are the journalists of the audiovisual establishment truly journalists like the others?

Now, there will henceforth be "neither purges nor deportations." Television will be independent of the government. The high authority will see to this. But have not the winds of "change" already swept over television? All in all, it is Mr Schreiner (PS), the Commission's rapporteur, who has best put it: "The high authority will be what the men and women appointed to it will make of it." Moreover, the applicational decrees will strongly clarify the law.

What is more, already the importance of the vote taken in the National Assembly on Saturday appears faded against the background. What has emerged in its place is that of the attitude of the communist group: For the first time, on a reform test issue, it has broken majority discipline.

> Mr Fillioud's bill is an undisputable "advance" toward freedom. But what is there to say? From the debate, through the somewhat forced expressions of joy and of despair voiced and worn by the ones and the others, the audiovisual freedom that emerges has a queer flavor.

On Saturday 15 May the National Assembly continued its debate on the articles of the audiovisual communications bill.

Journalists Like the Others

Article 83 extends to journalists working in one or several audiovisual communications enterprises the provisions of the labor code that have heretofore been applicable to their written-press counterparts. This extension concerns the definition of the professional journalist, the terms and conditions of termination of their employment contracts and in particular the "conscience clause," and the guidelines governing terms and conditions of remuneration and vacations.

In reply to a question by Mr Toubon (RPR, Paris), Mr Fillioud, minister of communication, stated that the officials of the broadcast services had just reconsidered their position and that "political programs would be broadcast over Antenne 2 and TF 1." Mr Schreiner (PS, Yvelines), rapporteur of the special commission, pointed out that the journalists of the private local radio stations should also have the benefit of this by-law.

Levies and Penalties

The Assembly adopted Article 83, then Articles 84 (obligation to declare sales of television receivers) and 85 (auditing of the accounts of television receiver vendors to ensure payment of the tax). Mr Fillioud indicated that the government considered levying a fractional tax on the second television receiver possessed by a household. This proposal, he added, was discarded, "for the time being," because the yield from this measure would be "relatively small" and would require control measures difficult to put in place. The deputies next adopted Articles 87 (protection, through the institution of a system of authorizations, of audiovisual communications enterprises against the "pirating" of original works or documents broadcast via their programs) and 88. The latter article provides for fines ranging from 500 to 50,000 francs for infractions of the provisions of Articles 84 and 85.

Article 89 stipulates a fine ranging from 4,000 to 500,000 francs in case of violation of the provisions of Articles 7 (government authorizations concerning the use of radio frequencies) and 9 bis (system of declaration and authorization applying to access to broadcast facilities by way of microwave facilities). Repetition of a violation or disturbance to the broadcasts of a public service will subject the offender to penalties that may range up to imprisonment for a maximum duration of 3 months. In addition, the court may order the confiscation of the installations and equipment involved.

High Authority and National Advisory Board

Article 90 provides that the initial high authority shall consist of three members appointed for 3 years, three members appointed for 6 years and three members appointed for 9 years. The president of the Republic, the speaker of the Assembly and the president of the Senate will each appoint one member in each of the three groups. The Assembly passed an amendment by the government stipulating that the members of the initial high authority shall be appointed "within 30 days from the date of promulgation of the present law."

(Editor's note: This amendment responds--for all practical purposes--to a desire to compel the president of the Senate to act without too great a delay... as regards appointing three members of the high authority.)

The Assembly next passed an amendment by the government providing that, temporarily and until 30 June 1983 at the latest, the National Audiovisual Communications Advisory Board may meet and deliberate officially as soon as at least 49 of the 56 members that are to compose it have been appointed. (Since the time required for the putting in place of the regional and territorial committes may preclude the rapid appointment of their seven delegates to the National Advisory Board, this provision is intended to avoid delaying the start of the latter's operation.)

Mr Fillioud: 'Neither Purges Nor Deportations'

The Assembly adopted an additional article proposed by the Commission which specifies: "Personnel whose transfer among the organizations provided for in Title III of the present law is necessary retain all rights under their employment contract and the legislation in effect." Mr Fillioud stated in this regard: "Contrary to what occurred when the 1974 law went into effect, the entering into effect of the present law will entail neither layoffs, nor purges nor 'deportations'. In 1974 and 1975, 1,641 persons were laid off or 'deported'. Nothing of this nature will happen this time. The working conditions and job security of the personnel will be guaranteed by a single collective labor agreement. The mobility of the personnel will also be assured. No one will be compelled to go work elsewhere, but everyone will have the option of working elsewhere should he or she desire it."

Freedom or Wardship?

During explanations pertaining to the vote, Mr Estier (PS, Paris), chairman of the special commission, said, among other things: "This law of freedom puts an end to the decades of direct guardianship exercised by the government over radio and television and will enable all those who work in the audiovisual field to exercise their profession sheltered from all pressures."

Mr Madelin had a different view: "We have been satisfied," he said, "to simply replace the term 'monopoly' with that of 'public service,' and that of 'derogation' with that of 'authorization.'" The law, he asserted, is worse than the previous ones, "because it is based on an erroneous legal concept that attributes to the state the ownership of the radio frequency spectrum, which in reality belongs to all the citizens, and because it multiplies the bureaucracy and its guardianships. It is better in some few respects, particularly that of the local radio stations."

Mr Toubon asserted that "Tomorrow, just as today, audiovisual communication will be dominated by a tentacular sector with all powers at its disposal." "At the conclusion of this debate," he thundered, "seeing the fortress you have erected, I must regretfully say to you: 'Farewell to freedom.'"

Mr Dumas (PS, Dordogne) pointed out that only one person had advocated retention of the law of 1974: "Mr Giscard d'Estaing, in his platform for a second term as president... " Turning to Mr Madelin, he added: "Your conception of freedom is that of the 19th century; it is a road strewn with the corpses of the weak annihilated by the strong, of the moral by the wily." "The law," he asserted, "also opens up the private sector, with all that this involves by way of caution but also by way of boldness."

"Our concern remains," asserted Mr Hage. In his view, the philosophy of the bill is too close to that of the law of 1974. He added: "Your bill cannot impart to the public service the force, the consistency, the flexibility and the dynamism it needs. You are giving to the Right, that is, to the private interests, the opportunity to take over the radio and television establishment for partisan purposes, to mobilize it against change." Mr Hage held that the "error" committed by Mr Fillioud "mortgages too deeply the future of the nation." Hence, the communist group would abstain.

Lastly, Mr Fillioud remarked: "We have affirmed our intent to let the tide of freedom have its way. Within rules and regulations, of course: Were we to leave things up to the initiative of each individual, the most powerful would be the vanquishers, [as published] added: "Who is going to vote for this law? Those who believe in freedom and change."

By a vote of 281 to 162 out of a total of 486 voters and 443 votes cast, the audiovisual communications bill as a whole was adopted at the first reading.

9399
CSO: 5500/2253

DGT OFFICIAL SAYS TERMINALS TO INCREASE TO 600,000 BY 1985

Paris ZERO UN INFORMATIQUE HEBDO in French 26 Apr 82 p 11

[Article by Eric Sorlet: "Does Telematics Have a Future in Business?"]

[Text] Will telematics find a privileged field of applications in enterprises? In which way will its applications methods modify computer strategy? What lessons can be learned from the first experiments? These are as many key questions to which the second Dialogues Dataid attempted, on 14 and 15 April, to bring some clues for answers. Chaired by Jacques Tebeka, director general of the Dataid group, this meeting made it possible to establish a conceptual bond between suppliers and users.

The second Dialogues Dataid, which was held on 14 and 15 April in Paris, and which was attended by over 100 participants, opened with a dinner discussion on the topic "From Consumer Videotex to Professional Applications of Telematics: A New Policy of the General Directorate for Telecommunications?" during which Herve Nora, head of DGT's (General Directorate for Telecommunications) telematics department, reviewed the administration's major policy lines, and more specifically, confirmed the availability, after 1 October, of rental-maintenance Minitel terminals at 70 FF per month, and the connection of 1000 videotex access points (PAV) into the Transpac network by the end of 1982.

The latter two factors are certain to encourage the development of professional applications. According to the latest DGT details revealed by Claude Termens, head of the DGT group for professional customers, the number of videotex terminals installed in France at the beginning of 1985 is conservatively estimated at about 600,000 units, including 80,000 in professional or collective settings (table 1).

A Potentially Universal System

None of the seminar participants questioned the future of videotex in business. The implantation of such communications systems seems foreordained and responds to the evolution of technology as well as that of needs.

Several businesses have exploited their experiences in this domain: Renault at Velizy; PSA-Peugeot-Citroen, which is installing in England its private videotex system, Vital (Prestel type) to improve communications between sales offices and the

Table 1. Estimated growth of videotex terminals.

	January 1982	January 1983	January 1985
Velizy	3,200	3,500	??
Ille-et-Vilaine	1,400	50,000	120,000
Professional and collective experiences	900	15,000	80,000
Others	--	--	400,000 (ex.: Picardie)
Estimated total	5,500	70,000	600,000

home office; the union of Banques Populaires, which is planning the development of domestic as well as foreign use between Banques Populaires and businesses, and eventually, individuals; and Viniprix, whose experiment for order placement has been in operation for two months.

For these enterprises several features argue in favor of videotex: its ease of installation (a telephone connection is sufficient), a dialog protocol which makes it possible to use it immediately without training, compatibility with existing computer systems thanks to front ends, as well as an implementation cost which is overall lower than that of a conventional system. On the other hand, the need for an interface to ASCII standards and an 80-column display (instead of 40), is often expressed.

The Cost of the Terminal Is Not a Determining Factor

The low cost of the videotex terminal, often advanced as an argument by DGT, does not appear to be a determining criterion in professional applications. The estimate of installation and operation costs for a videotex system, communicated by Claude Termens (table 2), confirms this impression.

The minimum fixed costs which must be devoted to the design, operation, and promotion of a service, are out of proportion with the costs involved in the installation and utilization of a terminal, particularly in the case of applications designed for users outside the business.

A first consequence is that a PME (small and medium-size business) will find it difficult to undertake outside services on its own, and will have to call upon outside services in order to distribute the fixed costs.

Opportunities for Manufacturers

The computer industry will benefit from the development of telematics. This is the position of current manufacturers.

For Gustave Barth, head of the telecommunications and PTT (Mail, Telegraph, and Telephone) relations service department for IBM France, telematics is no different from remote data processing, and videotex is just another means which may have strategic justifications, but also raises several questions: is the present consumer equipment adequate for business use? What overall savings can business expect from it? Does it not risk creating non-coherent information systems? Will standardization be able to withstand technologic change? What will PTT's exact role be?

Table 2. Estimate of monthly cost per terminal, for operating a videotex system

Station	Consumer use	Professional use
Terminal	--	7 FF
Communication	5 FF	600 FF
Data processing	10 FF	300 FF
Design	10,000 FF	100 FF
Operation	(electronic newspaper	(internal service)
Promotion	case)	

Whatever the answers, IBM provides videotex support in these four ways: integration on series 1 and 370 of software developed by SSCI (Computer Information and Assistance Companies) (as for Cap Gemini Sogeti); orientation toward direct support of Minitel terminals on 370 and 3705 machines; support of Videopad; and videotex concentration function for 3750 and 1750 autoswitches.

For CII-HB, represented by Mr Yon, head of the telematics and distributed systems division, and Mr Collas, deputy director of the "public markets" operation, videotex national taskforce, videotex generates new terminals, computer equipment, new applications, and new services, but also constraints of standardization, integration to protect computer investments, and additional equipment.

The selection of the Mini 6 for videotex applications is justified by its modularity, broad range of functions, and adaptability as front end.

"Telematics is an indirect way to force computer specialists to consider system ergonomics!" This comment by one of the participants fairly reflects a certain divergence between conventional data processing and the needs of businesses which use videotex, and which are particularly sensitive to the "communication" aspect of the system.

The Velizy experience reveals the same situation, since services are more often provided there by commercial agencies than by data processing ones.

For internal business applications, led by message circulation, users tend to favor entrusting practical management to a collegial structure under the executive in charge of the enterprise's information system.

Telematics will always use computer resources, but computer specialists will of necessity have to take into account the needs of users, if they want to play a role in the design of videotex services.

11,023
CSO: 5500/2242

STUDY RANKS TOP 50 FIRMS IN DOMESTIC DATA PROCESSING

Paris ZERO UN INFORMATIQUE HEBDO in French 3 May 82 p 35

[Article by Jean-Louis Cousin]

[Text] Nothing grows in the shade of large trees, they say. That is not entirely true in the case of the French computer market. The IBM oak of course spreads its branches as broadly as usual, taking up some 35.6 percent of the market by itself. But the CII-HB reed, whose flexibility risks more than ever to be put to the test, has held its ground so far, gathering an appreciable 15 percent.

All in all, during 1981, the top 50 manufactureers of computer equipment on the French market achieved a turnover of the order of 27,350 MFF (to be compared to the figure of 29 billion FF determined by the annual Sfib study; the 01 HEBDO probe is a good coverage of the quasi-totality of the French domestic market), with a growth of 25.3 percent over the preceding year.

As throughout this study, these figures are obtained solely on the domestic market, and therefore exclude exportations.

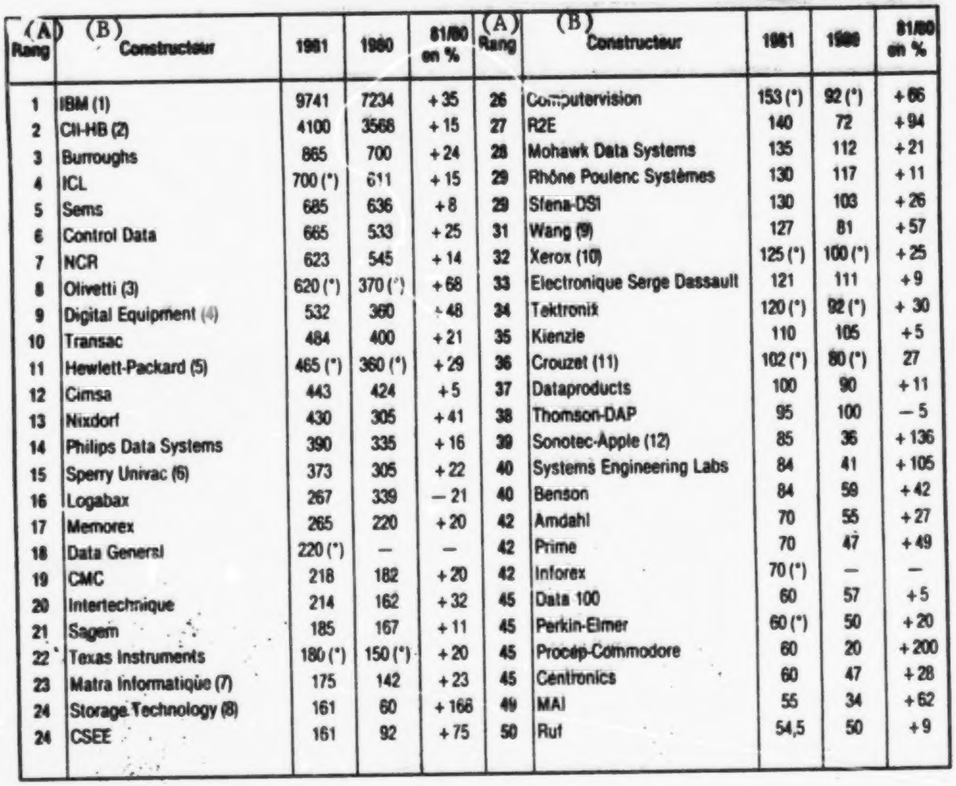
American Stars

Already significant between the top two, the gap widens with the ones that follow: Thomson (through its three subsidiaries Sems, Cimsa, and DAP) approaches but does not reach the 5 percent mark. In turn, CGE (Transac, CGA, Sintra, EVR, and so on) represents a volume of 3 percent of the total.

If we now look at nationalities, we note that the top five Americans alone have reaped about 45 percent of the French market. They are IBM, Burroughs, CDC, NCR, and DEC, which have achieved a cumulative figure of some 12,430 MFF, showing a growth of 32.6 percent over 1980.

The major five French manufactureers record a much more modest growth of the order of 12 percent. It is true that the exceptionally poor results of Logabax certainly had an influence on this figure. However, progress has been average for CII-HB and poor for Thomson. The top five French companies achieved 24.3 percent of the turnover of the top fifty. On the other hand, smaller French companies have experienced high growth rates, as has been the case for Intertechnique, and even more so for CSEE and R2E.

Turnover classification of the 50 top manufacturers on the domestic French market alone



(A) Rang	(B) Constructeur	1981	1980	81/80 en %	(A) Rang	(B) Constructeur	1981	1980	81/80 en %
1	IBM (1)	9741	7234	+ 35	26	Computervision	153 (*)	92 (*)	+ 66
2	CII-HB (2)	4100	3568	+ 15	27	R2E	140	72	+ 94
3	Burroughs	865	700	+ 24	28	Mohawk Data Systems	135	112	+ 21
4	ICL	700 (*)	611	+ 15	29	Rhône Poulenc Systèmes	130	117	+ 11
5	Sems	685	636	+ 8	29	Sfena-DSI	130	103	+ 26
6	Control Data	665	533	+ 25	31	Wang (9)	127	81	+ 57
7	NCR	623	545	+ 14	32	Xerox (10)	125 (*)	100 (*)	+ 25
8	Olivetti (3)	620 (*)	370 (*)	+ 68	33	Electronique Serge Dassault	121	111	+ 9
9	Digital Equipment (4)	532	360	+ 48	34	Tektronix	120 (*)	92 (*)	+ 30
10	Transac	484	400	+ 21	35	Kienzle	110	105	+ 5
11	Hewlett-Packard (5)	465 (*)	360 (*)	+ 29	36	Crouzet (11)	102 (*)	80 (*)	27
12	Cimsa	443	424	+ 5	37	Dataproducts	100	90	+ 11
13	Nixdorf	430	305	+ 41	38	Thomson-DAP	95	100	− 5
14	Philips Data Systems	390	335	+ 16	39	Sonotec-Apple (12)	85	36	+ 136
15	Sperry Univac (6)	373	305	+ 22	40	Systems Engineering Labs	84	41	+ 105
16	Logabax	267	339	− 21	40	Benson	84	59	+ 42
17	Memorex	265	220	+ 20	42	Amdahl	70	55	+ 27
18	Data General	220 (*)	—	—	42	Prime	70	47	+ 49
19	CMC	218	182	+ 20	42	Inforex	70 (*)	—	—
20	Intertechnique	214	162	+ 32	45	Data 100	60	57	+ 5
21	Sagem	185	167	+ 11	45	Perkin-Elmer	60 (*)	50	+ 20
22	Texas Instruments	180 (*)	150 (*)	+ 20	45	Procep-Commodore	60	20	+ 200
23	Matra Informatique (7)	175	142	+ 23	45	Centronics	60	47	+ 28
24	Storage Technology (8)	161	60	+ 166	49	MAI	55	34	+ 62
24	CSEE	161	92	+ 75	50	Ruf	54,5	50	+ 9

Key:
(A) Rank
(B) Manufacturer
(1) Turnover from French customers including all products (including autocom and typewriters)
(2) Including R2E
(3) Including electronic typewriters (40 percent of the total). Except Logabax and Hermes
(4) Financial year closed on 30 June
(5) Financial year closed on 31 October
(6) Financial years closed on March 1982 and March 1981 respectively
(7) Except MBC-Alcyane and Inforex
(8) Consolidated in 1981 with Documation. The latter achieved a turnover of 20.5 MFF in 1980
(9) Financial year closed on 30 June
(10) Estimated non-copier activity
(11) Except Sfena DSI
(12) Turnover achieved by Sonotec on the Apple line alone
(*) Estimates

Record Growth for Micros

The top five non-French European manufacturers have made significant progress: +61.8 percent with 2250 MFF. However, the figures for this progress are certainly improved by Olivetti's decision to include its electronic typewriters into its turnover of computer equipment.

An examination by categories leads to figures that are indicative of current market trends: for micro specialists, for instance, the recorded average growth is more than 120 percent. This is indeed the boom that had been expected.

In office automation, the progress settles at about 60 percent, which indicates a mushrooming growth here as well.

For large machines (IBM, CII-HB, Burroughs, ICL, and Control Data), the average growth rate has been 27 percent. Minicomputers for their part, have seen an average of about 25 percent.

And finally, let us look at a number of companies immediately behind the fifty, and likely to appear in the classification of major manufactureers in 1982: Datasaab/Ericsson Data Systems (38 MFF in 1980, with an unknown figure for 1981), Norsk Data (40 MMF), IER (39 MFF), General Automation (39 MFF), Plessey (35MFF), Leanord (35 MFF), Siemens Data Systems (35 MFF), and Modcom (30 MFF).

11,023
CSO: 5500/2242

CIT ALCATEL, CII-HB, OLIVETTI PRESENT INDUSTRIAL STRATEGIES

Paris ZERO UN INFORMATIQUE HEBDO in French 17 May 82 p 8

[Summary by Stephane Ilitch, of presentations given at Afcet/Sicob Office Automation Conference, which ended 13 May 1982]

[Text] Four European manufacturers, IBM, Olivetti, CII-HB, and CIT Alcatel, presented their industrial strategies at an essentially practically oriented conference, which brought the office of the future into a very concrete present, composed of in-situ implementations of available methods of installation and materials.

Four philosophies can be discerned among the various participants. IBM stresses a functional analysis of office work, and formulates work organization models in which office automation and information processing are broadly interpreted. Olivetti insists on evolution from a work station which integrates text processing and data processing, up to linkage with an office system covering the entire company.

CIT Alcatel readily equates office automation and telematics, pointing out that any office system depends on a perfect mastery of communications systems. And finally, a pragmatic CII-HB, which decided to apply all its know-how to its own company, is currently conducting a pilot experiment in a office automation and terminals department.

For IBM, the general picture of the office of the future presents a solid structure, ready to suppot all the sophisticated features of an individual work station.

The Olivetti strategy appears to be oriented more toward the wish to satisfy immediate needs; each of its presentations (decentralization of banks and of an industrial group in Italy) adopts different configurations based on bunching of the SP 600 individual work station.

CIT Alcatel stands out from the other participants by appearing less concerned with work organization and office reorganization, than with a mastery of internal and outside communications.

Finally, CII-HB also presents its office automation operational cell, based on Questar/T 12-inch screen terminals and on the TTX 80 text processor.

However, the largest obstacle to office automation comes from the incompatibility of the various systems with each other, which delays the decisions to invest in this type of equipment.

11,023
CSO: 5500/2242

END

JPRS 81397

29 July 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 230

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 81397

29 July 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 230

CONTENTS

ASIA

NEPAL

Satellite Communications Station for Nepal
(THE RISING NEPAL, 25 Jun 82)........................ 1

PAKISTAN

Major Telecommunications Project Being Implemented
(DAWN, 29 Jun 82)........................ 2

SRI LANKA

Precarious Future of Telecommunications System, Developments Reported
(THE ISLAND, 23 Jun 82)........................ 3

Briefs

New Switching System 4
Master Exchange 4

THAILAND

Interior Ministry To Use Satellites in Police Communications
(SIAM RAT, 31 May 82)........................ 5

Telephone Systems To Be Expanded
(BAN MUANG, 16 Jun 82)........................ 6

VIETNAM

New System Increases North-South Telephone Links
(Pham Nien; NHAN DAN, 4 Jun 82)........................ 7

Article Describes New Telephone System (Nguyen Doan; QUAN DOI NHAN DAN, 30 May 82)............. 11

Briefs
Radio Network in Mountain Provinces 14

LATIN AMERICA

BERMUDA

Parliament Discusses TV Programming, Other Developments (THE ROYAL GAZETTE, 19 Jun 82)......................... 15

New Technology Permits Lowering of Telex, Facsimile Rates (THE ROYAL GAZETTE, 24 Jun 82)......................... 17

BRAZIL

TELEBRAS Installs 2-Mile Length of Optical Fiber Cable (Jose Neumanne Pinto; JORNAL DO BRASIL, 29 Jun 82)..... 18

Satellite Contracts Signed With Canada, France (O ESTADO DE SAO PAULO, 1 Jul 82)...................... 22

National Company Pioneering in Optical Fiber Technology (MANCHETE, 3 Jul 82).................................. 24

Briefs
Satellite Communications Stations 27
Minicomputer Projects 27

NEAR EAST AND NORTH AFRICA

INTERNATIONAL AFFAIRS

Briefs
Israeli-Lebanese Radio Cooperation 29

KUWAIT

Plans for Satellite Stations Discussed ('Adil al-Ibrahim Interview; AL-WATAN, 27 Mar 82)...... 30

Gulf Cooperation in Telecommunications (AL-SIYASAH, 31 Mar 82)............................. 33

OMAN

Briefs

Telecommunication Link 36
Telephone Exchanges 36

WEST EUROPE

FEDERAL REPUBLIC OF GERMANY

State Secretary on Bundespost Telecommunications Services
(Dietrich Elias Interview; VDI NACHRICHTEN, 30 Apr 82).... 37

Bundespost Plans To Transmit Data by Satellite by 1984
(SUEDDEUTSCHE ZEITUNG, 15 Jun 82)........................ 43

FINLAND

Satellite TV Tests Starting in Rovaniemi
(HELSINGIN SANOMAT, 12 Jun 82)........................... 45

FRANCE

Financing Seen as Key to CIT-ALCATEL-India Contract
(Eric Leboucher, Eric Lecourt; L'USINE NOUVELLE,
27 May 82)... 47

Telecommunications Study Center Makes Technology Available
(Nicole Grange; L'USINE NOUVELLE, 27 May 82)............. 50

Thomson Division Steps Up Underwater Detection Development
(G. Bidal; ELECTRONIQUE ACTUALITES, 14 May 82)........... 54

Matra Strives To Be Top Domestic Producer of Terminals
(Eric Sorlet; ZERO UN INFORMATIQUE HEBDO, 17 May 82)...... 57

CIT-Alcatel, India Sign FR 3 Billion Contract
(LES ECHOS, 17 May 82)................................... 59

Briefs

Thomson Develops Multifunction Communications 61

SATELLITE COMMUNICATIONS STATION FOR NEPAL

Kathmandu THE RISING NEPAL in English 25 Jun 82 pp 1, 8

[Text] Kathmandu, June 24: A new dimension will be added the international communication service of Nepal after the completion of the satellite communication earth station project jointly undertaken by His Majesty's Government and the British Government, reports RSS.

Establishment of a standard 'b' earth station at ward no one of the Matatiratha village panchayat, construction of an international telecommunication building, an automatic telex exchange with 512 lines and installation of the equipment for the same are some of the major works under the project.

Installation of the equipment is completed and the earth station building is also nearing completion.

Testiner various sub-systems is continuing.

Tests of the systems linking it with the earth station will be conducted in July-August. All other works are also expected to be complete by September 26 this year.

Construction of the international communication building at Tripureswor is almost complete and the electrical equipment for the earth station are being installed.

Installation of the 512 telex exchange lines is complete and tests are being conducted it.

The earth station with a maximum of sixth channels will have direct telecommunication link with Europe, Africa, the South West Asian countries, Japan and Australia through the Intelsat-5 earth satellite over the Indian Ocean from September-October this year.

Although direct telecommunications link will be established with Japan, Hongkong, the United Kingdom and India only through the earth satellite initially, telecommunications service with rest of world is expected to improve considerably because of the link with those countries.

The ultra modern telex exchange is expected to contribute for the expansion of the telex facility. Fully automatic international telex service will also be made available on to the users in Nepal.

Thus the users will be able to dial direct almost all the telex numbers in the world.

The British Government has made available a grant assistance of about 3.1 million sterling pound and Nepal telecommunications corporation has spent about 10 million rupees for the project.

CSO: 5500/5858

MAJOR TELECOMMUNICATIONS PROJECT BEING IMPLEMENTED

Karachi DAWN in English 29 Jun 82 p 4

[Text] A major telecommunications project costing dollar 236.5 million is being implemented by the Pakistan Telegraph and Telephone Department to improve and expand local, long-distance and international telecommunications facilities and services.

The Asian Development Bank has approved dollar 29 million loan for the phase of the overall investment programme and will finance two components. They are (i) a high-capacity microwave system linking Karachi with Peshawar: and (ii) subsidiary routes to small exchanges and long-distance public call offices in unserviced rural areas.

Out of the total cost of dollar 236.5 million, the foreign exchange component will be of the order of dollar 120.5 million exclusive of contingencies, or dollar 135.5 million including contingencies.

The foreign exchange cost of the project is proposed to be financed, apart from ADB's 29 million dollars, by the World Bank to the extent of dollar 40 million, the Federal Republic of Germany dollar 30 million, Japan 31 million and Pakistan Government and other sources dollar 5 million.

The whole project is spread over 5 parts covering local network improvement and expansion, improvement and expansion of long distance telecommunications facilities, extension of international telecommunications facilities, expansion of telex and telegraph facilities and data processing facilities etc.

The Asian bank will finance installation of high capacity microwave system linking Karachi through Quetta to Peshawar: subsidiary routes to small exchanges and long-distance public call offices in rural areas.

The hich-capacity microwave system will provide a reliable telecommunication route between the northern and southern areas of Pakistan, linking provincial capitals, and will assist in the integration of remote areas with the rest of the country. The subsidiary routes component will primarily be a rural service and will directly connect 282 local exchanges in small town throughout Pakistan while the public call office component will provide public telephone facilities in rural areas currently without such a service. When completed, it will provide an estimate 1.6 million rural dwellers with access to modern telecommunications facilities for the first time.—PPI

CSO: 5500/5857

PRECARIOUS FUTURE OF TELECOMMUNICATIONS SYSTEM, DEVELOPMENTS REPORTED

Colombo THE ISLAND in English 23 Jun 82 p 3

[Text] SRI LANKA's Telecommunications System will be in a precarious position because nearly 50 per cent of the most qualified and experienced personnel in the Telecommunications service are moving to highly paid Middle East jobs.

The Minister Posts and Telecommunications Mr. D. B. Wijetunga, informed the President Mr. J. R. Jayewardene and the Cabinet of Ministers, the seriousness of the problem faced by the Sri Lanka Government in this regard.

The spokesman for the cabinet, Minster of State Mr. Anandatissa de Alwis, said that Minister Wijetunga in a report presented to the cabinet pointed out that the situation in this regard "appeared to be worsening as there is an indication that recruitment for jobs abroad has been intensified". During the first week of this month interviews for recruitment had been held in Colombo the Minister reported, of Telecommunications Engineers, Superintendenting Engineers and engineering labour grades. It is also reported that 150 officers including Chief Engineers and Superintendenting engineers have appeared for interviews for vacancies in Saudi Arabia and the United Arab emirates. It is expected that around 60 are likely to be selected.

Minister Wijetunga pointed out the experience of the Department was that the more capable and trained officers are invariably selected leaving the less experienced and the newer recruits behind.

In the lower categories it took at least three years to adequately train and qualify persons. While a crash programme for recruitment has taken place in view of the time required to adequately train persons, the department was not able to maintain always its services at an adequate level of efficiency. The situaton, Mr. Wijetunga said, has been aggravated with the introduction of modern technology and systems like Electronic Switching where the number of trained personnel was limited. The telecommunication service was being maintained under a severe strain on available manpower, the Minister pointed out.

Meanwhile, the Cabinet of Ministers gave its approval to Minister Wijetunga to go ahead with the programme of development and modernisation of the telephone system which has become necessary owing to severe congestion and the consequent development of dead lines, dropping of calls, cross connections, overhearing etc.

The following developments are to take place:

1. Instal a new Master Exchange of 20.000 lines in Colombo Central to replace the 14,000 lines and provide for the heavy demand anticipated in the area;
2. Replace the existing 3,500 Strowger lines at Maradana, (Colombo) Exchange;
3. Augment the Inter Exchange Junction Circuits and replace defective junction cables;
4. Augment and replace existing Strowger lines totalling 7,000 together with transmission equipment at havelock Town (Colombo)

The total cost of the programme is estimated to be Rs. 300 million, the foreign component of which is estimated at Rs. 250 million.

The equipment currently in used in Sri Lanka is from France and Japan. As such Sri Lanka Government wanted to confine the tenders to suppliers from these two countries.

CSO: 5500/5858

BRIEFS

NEW SWITCHING SYSTEM--The installation work on the new National Switching Centre has been completed and it has been commissioned. It is a transit exchange for subscriber trunk dialling. The new centre is an electronic switching system utilizing the latest computer-control technology. It cost Rs 14 million. The old National Switching Centre which was an electro mechanical crossbar type will continue to function. This centre had a technical capacity of 1,600 terminals which was fully utilised. The new centre has been commissioned with an immediate capacity of 2,900 digital/analogue trunk terminals. It has an ultimate capacity of 60,000 terminals. The new system will provide additional trunk terminals so that outstation subscribers could have access to stations which are on the S.T.D. network. Special features of this system is the substantial call handling capacity which is about ten times the number of calls its predecessor could handle and a large traffic carrying capacity which is about twelve times that of the previous system. With the commissioning of this new system the congestion which subscribers encountered in making S.T.D. calls will be eliminated. [Text] [Colombo DAILY NEWS in English 24 Jun 82 p 1]

MASTER EXCHANGE--On the recommendation of Mr D.B. Wijetunge, minister of Posts and Telecommunications, Cabinet approved a Colombo Area Telecommunications Development project, Stage 4. This will be for the supply of 30,500 lines, inter-exchange junction cables and associated transmission equipment. The Minister reported that severe congestion had led to dead lines, dropping of calls, cross connections and overhearing. Under the electronic system, when the exchange is jammed with calls automatic disconnections take place. A master exchange in Colombo Central is proposed with 20,000 lines to replace the existing 3,000 Strowger lines. Facilities at the Maradana exchange will also be augmented with the replacement of 3,500 existing strowger lines, augmentation of inter-exchange junction circuits and replacement of defective junction cables. At Havelock Town the existing 7,000 strowger lines will be augmented and replaced and transmission equipment improved. This will cost Rs 300 million with a foreign component of Rs 250 million. [Text] [Colombo DAILY NEWS in English 23 Jun 82 p 1]

CSO: 5500/5858

INTERIOR MINISTRY TO USE SATELLITES IN POLICE COMMUNICATIONS

Bangkok SIAM RAT in Thai 31 May 82 pp 1, 12

[Article: "Ministry of Interior Begins to Use Satellites to Make Contact Throughout the Country. Importance of Border Provinces Stressed"]

[Text] The Ministry of Interior is urgently improving the ministry's communications system by using satellites to provide support and to send orders from the cneter to locations throughout the country. The project, for which 55.3 million baht has been alloted, stresses building up national security.

A news report from the Ministry of Interior states that, at present, the Ministry of Interior has entrusted the Communication Division of the Office of the Under-Secretary of State, Ministry of Interior, with the task of preparing a plan to expand the ministry's communications system to the district level. The purpose of this is to enable all the provinces in the country to contact the districts and coordinate things with the center, including coordinating the internal activities of the administrative and police sectors.

The report stated that the communications system will be improved by increasing the number of telephones and teleprinters in the provinces so that they can be used to collect data and compile reports for the units concerned so that they can take prompt action. In particular, the border provinces that have been infiltrated by terrorists will be able to coordinate things with the military and with the other sectors concerned.

To do this, the Ministry of Interior will use a ground satellite system of communications. A main station will be set up in Bangkok and 10 smaller stations will be set up in Prachinburi, Trat, Nong Khai, Nakhon Phanom, Ubon Ratchathani, Chiang Rai, Nan, Mae Hong Son, Narathiwat and Kanchanaburi.

The report also said that this project of the Ministry of Interior will cost 55.3 million baht. Some of the money will be used to rent satellites belonging to Indonesia and some will be used to build the satellite ground station and the small stations.

11943
CSO: 5500/5854

TELEPHONE SYSTEMS TO BE EXPANDED

Bangkok BAN MUANG in Thai 16 Jun 82 pp 1, 16

[Article: "The Number of Telephones Will Increase By More Than 100,000 By 1984"]

[Text] Yesterday morning, the 15th, Admiral Amorn Sirikaya, the minister of commerce, gave an interview to reporters before going to attend a cabinet meeting. He discussed the activities of the Telephone Organization, saying that things are being carried on in accord with the plan and that attempts are being made to rectify [the shortcomings], especially service, which is not as good as it should be. The minister of communications said that if things are expanded too quickly, there may be problems. Thus, it is not our policy to increase the number of officials since labor costs are very high. It must be admitted that service is still not good.

Admiral Amorn said that in the Fifth Development Plan, the Economic Development Council discusses increasing the number of telephones by another 900,000 numbers. This will help satisfy demand because it will increase the number of telephones to 2 million. Besides this, there is a plan to add another 130,000 telephones by 1984. As for the appointment of a new director, Admiral Amorn asked the reporters to ask Mr montri Phongphanit, the deputy minister of communications.

When asked whether the state enterprise officials who have made mistakes will be punished, Admiral Amorn said that "if they are transferred, I will go to court again." The reporters asked about the appeals by the people, who say that the number of buses has declined and that this has caused great crowding on the buses. Admiral Amorn said that he would ask Mr Wira Musikaphong, the deputy minister of communications, about this and have the problem solved.

11943
CSO: 5500/5854

NEW SYSTEM INCREASES NORTH-SOUTH TELEPHONE LINKS

Hanoi NHAN DAN in Vietnamese 4 Jun 82 pp 3, 4

[Article by Pham Nien, head of the Posts-Telegraph General Department: "The North-South Open Wire Communications System: a Project of Scientific and Creative Labor"]

[Text] At the start of June, 1982, following the inauguration and start-up of the Hoa Sen Satellite Communications Ground Station (August, 1980) and the Hanoi-Haiphong communications cable (June, 1981), the posts-telegraph sector completed the construction of and put into use the 66 Hanoi-Da Nang carrier communications channels of the Hanoi-Ho Chi Minh City-Minh Hai open wire communications project. From now on, the Hanoi-Da Nang communications line and the communications lines between Hanoi and Ho Chi Minh City and a number of other localities in the country will have an additional group of stable open wire communications channels.

With the formal inauguration of the 66 open wire communications channels in the Hanoi-Da Nang technical area, the number and the quality of direct north-south communication links have been markedly increased. On the average, there will be thousands of telephone calls handled each day, 46 percent of which will be directly between Hanoi and Ho Chi Minh City.

From now on, the 16 provinces along Route 1A and Route 4 will use the open wire communication lines of rather high quality for direct communications with Hanoi; the more distant provinces, such as Gia Lai-Kontun, Dac Lac, Lam Dong, Tay Ninh, Song Be, Dong Thap, An Giang and so forth, will establish communications with the central level through communication relays at the engineering stations. The objectives of the posts-telegraph sector is to establish direct open wire communication lines from Hanoi to the 40 provinces and municipalities and the special zone.

Reaching the Pinnacle of Technology

We can be proud that we have designed and constructed a long multi-channel, open wire communications system involving pairs of wires totalling 21,472 kilometers in length, more than 40 22 to 54 meter tall supports across rivers, 138 kilometers of underground cable, 330 carrier generators of various types, 29 engineering stations and 50 security stations along the entire line that measure a total of more than 23,000 square meters.

The process of building the project has been the process of growth in all areas, especially in the field of organizing guidance and carrying out capital construction. It has also been a process of reaching the pinnacle of carrier communications technology and providing stable communications along the entire 2,080 kilometer long project.

In our country, with the assistance of the socialist countries, carrier communications technology was put in widespread use in 1956 with one channel and three channel electronic carrier generators. However, we were only familiar with small-scale projects, projects involving direct communications between two terminal carriers or two carriers with an amplifier engineering station between them.

The 2,080 kilometer long carrier information project has higher technical requirements. In the renting of telephones at any two points in the country, the parties hear each other clearly without interference and without voice distortions, communications have a high degree of reliability and there are no more than three audio relays in the entire project.

As regards the transmission of electricity, special attention has been given to placing the amplifier engineering stations at appropriate intervals in order to use the least possible electricity; not one station is below the amount of time permitted for receiving signals in order to eventually insure that the interference accumulated along the entire project does not exceed the permissible value.

In addition, by means of suitably placing the various styles of machines in the electric circuitry in order to achieve frequency band turnover and translation, the protection against audio distortion and the quality of communications have been improved.

The construction, without the assistance of foreign experts, of a project involving such complex and modern technical requirements represents a major effort and reflects the attempt to become the masters of communications science and technology by the corps of cadres and manual workers in the fields of design and construction.

The majority of the open wire system passes through the lowlands and seacoast and is able to withstand winds of 36 meters per second. The lead wires are of the 3 millimeter BCM-1 bimetalic type. The nearly 44,000 steel reinforced concrete poles 7.3 meters tall have been designed to last more than 30 years.

The shortage of electric insulators has been the greatest difficulty. The posts-telegraph sector has coordinated with the Hai Duong Porcelain Works to improve its production techniques in order to improve the insulating properties of its insulators. As a result, it has not been necessary to import the nearly 200,000 insulators needed for the project.

Constructing systems of tall supports to bring wires across rivers, more than 10 of which involve supports nearly 50 meters tall, is a large volume of work, work that is very new to the design, construction and assembly corps of the sector. At the Tien Giang and Hau Giang Rivers, which are about 1 kilometer apart and nearly 40 meters deep, the communication line construction workers decided to lay underground cable across the rivers. With the help of the Southern Winch Corporation, the posts-telegraph sector, for the first time in its history, was able to lay these underground cables.

As regards construction, the sector has constructed 21 engineering stations which, including the space allocated for the installation of machinery, amount to more than 20,000 square meters and has made full use of existing area to deploy eight engineering stations. The provinces and local construction corporations have overcome very many difficulties to insure the virtual completion of this construction work in time to provide space for the installation of machinery.

At the terminal engineering stations, together with establishing the main communication channels, they have also established feeder lines to the long-distance switchboard. At some places, due to the shortage of feeder cable, the sector mobilized LVK-12M micro-electronic carrier generators to set up high frequency feeder lines. The sector has also advocated the automation of long-distance calls "in one direction" by establishing within each province a number of pay phones of the Hanoi automated switchboard. Along the long-distance communications line, geographical conditions are very complex and it will be difficult to maintain the wires and equipment once the project has been put in use. Therefore, the construction process has had to be coordinated with preparing the conditions needed to provide good maintenance. The nearly 50 security stations along the line are concrete buildings that were rapidly constructed by transporting pre-cast members to construction sites.

The sector has mobilized dozens of types of electronic measuring equipment, including modern machines, such as the P51A which is used to check for obstacles in lines, frequency counters and so forth for engineering stations.

The posts-telegraph sector has completed the most important work in building the Hanoi-Ho Chi Minh City-Minh Hai open wire communications project. The jobs that remain to complete the entire project and utilize it effectively are still quite large. Work must continue on completing the Da Nang-Ho Chi Minh-Minh Hai technical sector, which includes a number of main engineering stations. Due to the pressing need to provide communications support, each section of the project and each pair of wires that are completed must be put into use immediately. Therefore, formulating plans for and conducting tests of the AC electricity norms of each amplifier section and the entire line and establishing management records for lines and equipment are necessary jobs, jobs that will lay the foundation for properly managing and maintaining the quality of communications of the entire line, jobs which the posts-telegraph sector must make every effort to perform.

Combating negative phenomena along the communications lines to insure uninterrupted communications is an important matter that must have the competent support of the various levels and sectors in keeping with the spirit of Premier's directive 230/TTg.

Improving the ability of the technical cadres and personnel to manage, regulate, command and utilize the entire communications line in exact accordance with the technical regulations and standards of the sector and defining their spirit of ownership as regards this important communications line are a basic factor in insuring that the project is operated in a manner reflecting high efficiency and high quality.

In keeping with the resolution of the 5th Congress of the Party, the posts-telegraph sector, in a spirit of self-reliance and creative labor, is steadily building a unified national communications network that is linked to the modern international communications networks and is highly efficient.

7809
CSO: 5500/5840

ARTICLE DESCRIBES NEW TELEPHONE SYSTEM

Hanoi QUAN DOI NHAN DAN in Vietnamese 30 May 82 p 2

[Article by Nguyen Doan, the Posts-Telegraph General Department: "Our Country' Largest Open Wire Communications Project"]

[Text] Since the end of May, anyone travelling from Hanoi to Da Nang has seen the 1,500 newly erected telephone poles running along National Highway Number 1. On each pole are three cross pieces supporting 12 pairs of wires. Every few dozen kilometers, these pairs of wires pass through engineering stations in order to technically process the signal by means of modern communications equipment. These comprise technical area number one, the key item of the Hanoi-Ho Chi Minh City-Minh Hai open wire communications project, which was recently completed and put into use, thereby significantly increasing the communications capability of the posts-telegraph sector. As a result of it, the number of communications channels between Thanh Hoa and Hanoi has increased from 3 to 15. Consequently, communications between Hanoi and Thanh Hoa are much more convenient and rapid. When receiving requests for long-distance calls from the agencies, enterprises and people of Thanh Hoa to Hanoi, the posts-telegraph personnel of Thanh Hoa need not waste time establishing contact with the long-distance telephone personnel of the Hanoi station but can directly connect calls to the automated switchboards in the Hanoi network. Because technical area number 1 has been constructed and put into use, the number of wired information channels between Hanoi and Vinh has increased four-fold. Vinh also has a communications line linking it directly with Da Nang and Ho Chi Minh City. The number of information channels between Hanoi and Hue, Da Nang, Quy Nhon and Ho Chi Minh City has also increased from two to five times.

That only 12 pairs of telephone lines on three cross pieces provide so many information channels to the provinces to use is due to the fact that the posts-telegraph sector has made full use of the transmission capabilities of the lines by installing multi-channel carriers along them. As a result of this equipment, on each pair of wires, in addition to transmitting a current with a frequency of 300-3,000Hz for conversation between two persons, it is also possible to convert the voices of other persons into currents that have a frequency exceeding 3,000Hz and transmit them over the same pair of wires.

When this technical area was being constructed, another technical problem was resolved. Because the voice current from Hanoi to Da Nang must be transmitted over a very long distance and would become attenuated on the transmission lines, thereby causing it to become weak and possibly even disappear, telephone conversations would not be possible if a way was not found to increase this current; therefore, amplifier stations located at specific intervals along the Hanoi-Da Nang lines are used to strengthen the audio current or high frequency current that has become weak.

However, the completion of technical area number 1 of the Hanoi-Ho Chi Minh City-Minh Hai open wire communications project only represents the completion of the key item of the project. Construction work must continue because this open wire communications project is 2,080 kilometers long, the third longest in the world. In order to put the entire project into use at its design capacity, the posts-telegraph sector must complete two more technical areas similar to technical area number 1, and this work is being carried out in a very urgent manner. Posts-Telegraph Construction Committee Number 3, although it only has a few people, has actively completed the necessary procedures, paid compensation for the land and houses of the people through which lines pass and coordinated with troops to find and disarm bombs and mines of the Americans and the puppets still remaining at construction sites. The Posts-Telegraph Design Institute worked very hard to make nearly 200 blueprints for the various wire project items, tall poles, cables for crossing rivers and station buildings. The Posts-Telegraph Supply Corporation has provided a full supply of high quality materials and transported to sites various types of multi-channel carriers, amplifiers, gauges, rectifiers, generators and electric storage batteries. The main construction units, Posts-Telegraph Projects Corporations Number 1 and Number 2, the Posts-Telegraph Concrete Materials Enterprise and the Posts-Telegraph Communications Equipment Repair Enterprise, which must carry out construction over a line that is more than 2,000 kilometers long and must cast 20,000 cubic meters of steel reinforced concrete, require 9,000 tons of cement and 7,000 tons of steel. The Da Nang to Minh Hai section requires the erection of 20,000 iron reinforced concrete poles, each of which is 7 meters long and weighs 4.2 quintals. The units made many innovations to improve their techniques and rationalize production in order to overcome numerous difficulties and maintain the construction rate. The site supervisors of Construction Committee Number 3, the Design Institute, the Capital Construction Department, the Guidance Committee and so forth have constantly been at construction sites to promptly meet emergency requirements and difficulties involving materials for construction; the other sectors and the various localities have helped the posts-telegraph sector with supplies, labor and technology for project construction. To date, more than 20,000 poles have been erected along the Da Nang to Minh Hai section and, on these poles, a cross piece with four pairs of wires has been installed, consequently, the posts-telegraph sector has linked Hanoi to Ho Chi Minh City entirely by means of open wire communications.

At present, the units participating in construction have completed virtually all of the most difficult work in the Hanoi-Ho Chi Minh City-Minh Hai open wire communications project.

In the not too distant future, once the second and third cross pieces have been installed on the poles from Da Nang to Minh Hai in the two remaining technical areas and the engineering stations have been constructed along this line, the posts-telegraph sector will put the entire project into operation at its design capcity, which consists of 66 informatinn channels capable of providing greatly increased telephone service to the provinces of the entire country. However, over the past several years, in order to quickly realize returns from the capital that has been invested, the posts-telegraph sector has not waited for the project to be completely constructed but has, instead, made an effort to put the completed parts of the project into use. On the lines that have been constructed, workers at telecommunications centers 1 and 2 have undertaking the tasks of managing and operating equipment and protecting communication lines, thereby meeting the increasing communication needs in the leadership and guidance of production and in supporting combat and the people.

Therefore, although the entire project has not been completed, each year, by means of this project under construction, the posts-telegraph sector has quickly arranged many long-distance telephone conversations between Hanoi and Ho Chi Minh City, among the various provinces and between the provinces and districts throughout the country.

7809
CSO: 5500/5840

BRIEFS

RADIO NETWORK IN MOUNTAIN PROVINCES--The Vietnam Radio and Television Commission recently held a conference in Quang Ninh Province to discuss new tasks on radio and television broadcasting in northern mountain provinces. Over the past years Quang Ninh, Lang Son, Cao Bang, Ha Tuyen, Hoang Lien Son, So La, Bac Thai and Lai Chau Provinces have established 852 radio stations and wired radio posts; installed 50,000 home loudspeakers and 4,500 public speakers. Representatives of these provinces who attended the conference have signed an emulation agreement to accelerate their propagation task for 1982 which is aimed at encouraging the people to carry out satisfactorily the two strategic tasks of national building and defense. [Hanoi Domestic Service in Vietnamese 1430 GMT 5 Jul 82 BK]

CSO: 5500/5862

PARLIAMENT DISCUSSES TV PROGRAMMING, OTHER DEVELOPMENTS

Hamilton THE ROYAL GAZETTE in English 19 Jun 82 p 5

[Text]

Government was yesterday urged to investigate whether programmes shown on Bermuda television via satellite breached any international laws.

The call came from the Opposition Progressive Labour Party after **the Hon. Sir John Sharpe,** Minister of Home Affairs, could only give an assurance that no such regulations were being broken "to our knowledge".

Sir John was also rapped by the Opposition for saying that research had yet to be carried out on the implications for Bermuda of television technology now available.

Mr. Austin Thomas (P.L.P.) said he found it "absolutely incredible" that Government should make such statements when it had been inundated with information on the subject over the past two years.

The point arose during discussion of the Public Service Broadcasting Regulations 1982. Sir John said that when the public broadcasting act had been changed so that powers were vested in the Minister of Home Affairs rather than the Governor, the necessary changes in the regulations had not been made.

"These regulations are a consequence of those changes in the act, but otherwise they are exactly the same as those already on the books," he said.

Mr. Frederick Wade, Opposition spokesman on Home Affairs, stressed the importance of Government keeping up to date with advances in broadcasting. Certain events were now shown on Bermuda television via satellite.

"Are these satellites being used in accordance with international law?" he asked. "Or are laws being breached, and so putting our good name internationally at risk?"

Mr. Wade said the regulations made no provisions for latest technological advances in broadcasting, and asked how Government planned to deal with such changes. He was also concerned at how Government had been involved with considering the ZBM/ZFB merger when the broadcasting regulations made it clear authority was vested in the Governor until yesterday's legislation.

Mr. Wade said that political broadcasting was another controversial area. But the guidelines for such programmes were drawn up by the Broadcasting Commissioners, a group who were in the main Government supporters. He felt such rules should be made by Parliament.

Sir John said there were no breaches of international regulations regarding satellite transmissions "to our knowledge". There had been no complaints from U.S. authorities. He agreed with Mr. Wade that the broadcasting regulations did not cover latest advances. "This is something we will have to do, but we have simply not got the expertise locally," he said.

He admitted there was an "area of doubt" over the role of Government and the Governor in the case of the ZBM/ZFB merger. But both stations had conformed to the regulations. If Government had not approved, it could have made the legislation being considered retroactive and so would have had the necessary powers.

Referring back to advances in broadcasting, Sir John said: "We have got a lot of work to do on this."

If that was so, asked Mr. Thomas, why had money been spent on bringing in a Canadian expert to assist Government more than a year ago? And what had happened to the wealth of information that had been provided to Government.

"To come today and say this basic groundwork is only now being pursued, I find absolutely incredible," he said. "Is it because Government does not want to move into the 21st century? What is the problem?"

Mr. Wade said another problem area was that of home videos. There had been cases in the U.S. of film companies protecting their rights. And a representative of one company had been reported in Bermuda as saying his firm would sue anybody found taping films illegally.

"What is Government doing to make sure our citizens do not find themselves in trouble with multi-national companies?" he asked. "A video is becoming as popular in the home as a record player."

Sir John said Government had referred the matter of videos and taping films to the Attorney General. He had advised that taping might well be illegal but the difficulty would be for a company trying to find somebody to take to court.

The regulations were approved.

CSO: 5500/7551

NEW TECHNOLOGY PERMITS LOWERING OF TELEX, FACSIMILE RATES

Hamilton THE ROYAL GAZETTE in English 24 Jun 82 p 15

[Text]

CABLE and Wireless is to announce across the board reductions in international telex rates for Bermuda subscribers.

The cuts, due to be unveiled tomorrow, will reduce the cost of some calls by as much as 26 percent and are due to take effect from July 1.

A Cable and Wireless spokesman told Business Week the biggest reduction would be on traffic to Britain which is currently charged at the rate of $2.70 a minute. The new rate will be $2.

Telex calls to the United States and Canada are to come down 15 percent and will cost $1.70 a minute under the new tariff list.

Along with the new prices, Cable and Wireless will introduce a new charging structure, which will allow costs to reflect more accurately the time subscribers take to send a message. Charges will be calculated in six second increments rather than the present method of one minute minimum periods.

The company's Bureaufax service — the transmission of manuscript and photograph facsimiles — will also be offered more cheaply from the end of the month.

Charges for transmissions to the U.S. and Canada will be reduced to $6 from $8 per page while prices for Britain and Europe will drop to $7.50 from $10 a page.

The new prices and charging structure come in the wake of a recent Cable and Wireless policy decision to make its overseas branches fully accountable for profits.

International telex traffic from Bermuda has been growing at the annual rate of about 12 to 15 percent and current volume is thought to be in excess of two million minutes per annum.

Said the company's spokesman: "Obviously this increasing volume has allowed us certain economies of scale and this is one reason why we are now able to reduce prices. Another reason is that the new technology has helped bring prices down."

CSO: 5500/7551

BRAZIL

TELEBRAS INSTALLS 2-MILE LENGTH OF OPTICAL FIBER CABLE

Rio de Janeiro JORNAL DO BRASIL in Portuguese 29 Jun 82 p 21

[Article by Jose Neumanne Pinto: "Brazil Uses Optical Fibers for Telephones"]

[Text] Sao Paulo--With the installation on July 1 of a cable completely developed in the laboratories of Campinas State University (UNICAMP) and TELEBRAS [Brazilian Telecommunications, Inc], Brazil enters the area of optical fiber communications with its 3,200-meter connection between the telephone exchanges of Jacarepagua and Cidade de Deus in Rio.

The cable contains four optical fibers and was manufactured with technology developed in the laboratories of the UNICAMP Physics Institute and the TELEBRAS Research and Development Center (CPqD) and coated by Condugel, a Brazilian corporation. With a capacity of 480 telephone communications channels in an experimental phase, it inaugurates a revolutionary form of telephone signal transmission by laser beams in Latin America.

Advantages

With less than 2 centimeters in diameter, the cable is capable of carrying information equivalent to that which can be carried by a minimum of 920 copper wires of a conventional system. This means that in order to carry the same information the conventional cable would have a diameter of almost half a meter, according to information from the chief adviser of the planning department of the TELEBRAS CPqD in Campinas, Antonio Pedro Coco.

"The two main advantages of optical fibers over conventional copper wires are the low signal loss because of the high frequency that can be obtained by laser beams (making it unnecessary to have repeater stations every kilometer of wire) and the high rate of transmission which means a larger information carrying capability," explained Professor Ramakant Srivastava, in charge of the optical fiber project of the Gleb Wataghin Physics Institute at UNICAMP.

Moreover, concluded Professor Coco, the signal that will be tested between the Jacarepagua and Cidade de Deus exchanges will be much clearer, and the cable, which will allow the use of the complete system, will be installed under normal conditions (under streets, sewer mains, and so forth).

National Industry

Professor Srivastava explained that national industry is already prepared to make the equipment needed for transmission by optical fibers, thanks to the pure and applied research by his group and to the development of technology by physicists of TELEBRAS. He believes that within a year and a half it will be possible to make the multimode type optical fibers in Brazil, since its technology is already known.

"Today, unfortunately, the optical fiber production process cannot be entirely national because we obtain it by means of purified quartz rods (nearly half a meter long) sold (at nearly $50 each) by a German company which has a world monopoly of the quartz purification technology. Brazil is the largest producer of quartz in the world. The German company buys our quartz, purifies it, turns it into rods and then sells it to Brazil at a very high price. We want to learn the technology of producing fibers from unpurified quartz and I believe that by 1983 we can achieve that," said the physicist.

The chief adviser of the planning department of the TELEBRAS CPqD--located on the highway which links Campinas and Mogi-Mirim near Barao Geraldo, where the UNICAMP campus is located--Antonio Pedro Coco explained that the system requires, in addition to the cable, a signal converter (multiplexer), which converts the voice (analogical signal) into an electrical signal and then transforms it into light (optical signal), a laser ray emitter and a photodetector and emitter. These pieces of equipment were developed in Campinas and can already be made in Brazil, providing some industry becomes interested in obtaining their technology.

"The difference between Brazil and other Latin American countries is this: We have been developing a project for obtaining our own technology in this field for 7 years. Meanwhile, the Argentine Government has just bought 7,500 kilometers of optical fibers for $120 million from Japan for the installation in Buenos Aires of the largest system of that type in the world. Up to now it has not been installed and if the government had given the money to the physicists, the country would have its own technology in 3 years," said Professor Ramakant Srivastava.

Sergio Porto Brought the "Know-How"

Physicists confirmed theoretically the efficiency of optical fibers as an information carrying system in 1966 but it was not until 1970 that the Corning Company, a great multinational company which makes glass, managed to make an optical fiber industrially feasible.

The interest on the subject in Brazil was imported by Rio physicist Serio Porto. Invited by the founder of UNICAMP, Zeferino Vaz, to return to Brazil, the physicist, one of the greatest international specialists in laser rays, brought to Campinas the know-how he acquired in the laboratories of Bell Telephone and the University of Southern California.

In 1975, Sergio Porto brought Indian physicist Ramakant Srivastava from the United States, the only PhD left of the founding group of the optical fiber project in the Gleb Wattaghin Physics Department of UNICAMP. In 1976, TELEBRAS, interested in obtaining its own technology in the field, began to finance research by the UNICAMP group (this year, for example, an agreement stipulates 76 million cruzeiros in TELEBRAS funds for research alone, without counting equipment). Since then, the group has been working uninterruptedly in the five laboratories installed in the Barao Geraldo Campus.

Fibers are Made of Pure Silica

An optical fiber is a system of two cylinders of special glass obtained from a very pure silica. The inner cylinder is 50 microns in diameter (a micron is the one-thousandth part of a millimeter) and the outer is 125 microns in diameter (which means that its thickness is that of a human hair).

Those are the dimensions of the multimode system, which has already been developed in Brazil. In the "monomode" system, which is being studied by the UNICAMP physicists, the thickness of the inner cylinder is five to 10 times smaller (it must be from 5 to 10 microns in diameter). The difference between the two systems resides in the diameter and capacity.

The information signals (which can be television pictures, telephone signals or computer data) are emitted in the interior of the internal cylinder made of "doped" sand (mixed with other metals, primarily phosphorus, germanium or aluminum) in the form of waves (modulations) by means of a laser ray. The outer cylinders are made of pure silica. Once the optical fiber is obtained, it is coated and only then is it placed in the cable which should carry four of them, two for the transmission of information and two as reserves for greater security of the system.

In a recent congress in the United States, Professor Ramakant Srivastava saw a system developed by Bell Telephone in which, for 101 kilometers without repeaters, the optical fiber cable was capable of carrying more than 1,000 channels of telephone conversations.

UNICAMP Develops New Technologies

The technology of equipment which uses solar energy for drying agricultural products on the properties of Deputy Herbert Levy, and the "Know-how" for obtaining textured protein from soybeans used by SADIA [expansion unknown] was developed in the same place: The UNICAMP campus of Barao Geraldo.

From the UNICAMP laboratories which developed the equipment and optical fiber used by CETEL [Rio de Janeiro State Telephone Company], also came the PCM (Pulse Code Modulation) equipment of 120 channels (which allows the use of a single telephone line by 60 persons at the same time) used by TULEPAR (expansion unknown), and special materials for use in electronics, particularly silicon and ultrathin wires used by TELEBRAS.

Philosophy

The development of pure and applied research for direct use by companies has been part of the basic philosophy of UNICAMP since the university was founded by Zeferino Vaz. An enemy of the "ivory towers," which Brazilian universities were becoming, Professor Zeferino Vaz always advocated an intensive and useful dialog between Brazilian scientists and businessmen.

"Without losing the permanent vocation of producing and storing culture, the modern university should participate through a critical and creative process in the progress of the country, suggesting alternate models of development. A chapter in that story is the relationship of the university with private enterprise. Unfortunately, we have not yet achieved in UNICAMP as extensive a relationship as we want with the small and medium national companies. However, the basic objective of our work as leaders of the university is to seek a closer relationship with the objective of making advanced technologies feasible so as to avoid having to import equipment--no matter how sophisticated it may be," explained the present rector, Professor Jose Aristodemo Pinotti. Pinotti acknowledges that the Technological Development Company, CODETEC, created by Zeferino Vaz to facilitate that UNICAMP-business relationship, has not played its role in the manner desired and works well in some periods and sleeps during others. However, the university itself went through a long 4-year sleep from which it appears to be wanting to awaken now.

In periods of greater activity, scientists of UNICAMP performed research on hydrogen as a motor fuel. The energy group physicists developed electrolyzers (equipment for producing hydrogen from water through electrolysis) which are used by the Sao Paulo Power Company (CESP) in its powerplant of Corumbatai, Rio Claro, in the interior of Sao Paulo.

The physicists of the laser ray group developed argon laser equipment, which is already widely used successfully by ophthalmology clinics for eye operations. The same group, founded by Sergio Porto, created equipment for use in connections in large electric powerplants.

Semiconductors for microelectronics developed by UNICAMP are being used by TELEBRAS and ELETROBRAS [Brazilian Electric Power Companies, Inc], using the experience of the engineers of the university in the development of systems for electric transmission lines.

The minister of agriculture uses solar refrigeration equipment created by the group of physicists and engineers led by Professor Joao Meyer, now in France. The Brazilian Agricultural and Livestock Research Company (EMBRAPA), applies bacterial insecticide to the food of penned pigs on the basis of experience obtained on the campus of Barao Geraldo.

The prefecture of Paulina is studying the effects of school lunches on children in the first grade after a UNICAMP research, whose nutrition specialists developed a quick freezing process for coffee used by the Cacique Company, which makes and exports Brazilian powdered coffee.

8908
CSO: 5500.2292

SATELLITE CONTRACTS SIGNED WITH CANADA, FRANCE

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 1 Jul 82 p 11

[Text] Minister of Communications Haroldo Correa de Mattos said yesterday in Rio that the launching of two domestic satellites scheduled for February and August 1985 is the most indicated and definitive solution for attending to the needs of the country in the system of telecommunications by satellite. He declared that it is a matter of a political affair which is that of occupying an orbital position which could be occupied by another country.

The minister explained that the contracts signed yesterday betwen EMBRATEL [Brazilian Telecommunications, Inc] and Spar Aerospace and Arianespace, Canadian and French, respectively, for $122 million, nearly 20 billion cruzeiros, for the construction of two satellites, and another $58 million, almost 10 billion cruzeiros, for launching them into space; plus another $11 million, 1.87 billion cruzeiros, in "incentives in orbit," for insuring the useful life of the satellites, is a long project "the high point of national integration, which will be used in Telemedicine, the offshore shelves of PETROBRAS [Brazilian Petroleum Corporation], construction of hydroelectric powerplants, mineral prospecting in the Amazon Region, Education, Agriculture and coverage by radiobraodcasting."

Minister Haroldo de Mattos also said that the contracts include equipment for telecommunications, tracking and control station, which will be financed by Canadian and French banks. He said that EMBRATEL by choosing the Canadian company instead of NASA did so because the U.S. company did not adapt itself to the interests or timetables of the Ministry of Communications. The two satellites will be launched into space by the French rocket "Ariane" of Arianespace because it has a date available for Brazilian equipment in February and August 1985 and they will carry only two satellites, unlike NASA, which will make the launchings using the Columbia and carrying four satellites, which will result in a longer wait.

The Brazilian domestic satellite will remain at a distance of 36,000 kilometers from earth, weighs 1,140 kilograms, is 7.09 meters high, 2.16 meters in diameter and allows the simultaneous transmission of 24 television programs and 12,000 simultaneous telephone connections by satellite. Its launching will be made by the Ariane rocket, which weighs 234 tons and is 49 meters high with four stages. It will take off from French Guinea. In space, it will remain over the Amazon Region near the borders of Colombia, Venezuela and Peru.

For EMBRATEL president Helvecio Gilson "Brazil will be the first Latin American country to place its own satellite in service, making possible the complete coverage of national territory, linking extreme points of borders, improving the safety of flights at any point of the country and attending to areas of recent development and priority projects such as Tucurui, Carajas, Itaipu or Serra Pelada."

8908
CSO: 5500/2292

NATIONAL COMPANY PIONEERING IN OPTICAL FIBER TECHNOLOGY

Rio de Janeiro MANCHETE in Portuguese 3 Jul 82 pp 140, 141

[Text] For the first time in the recent history of Brazilian technology, it was possible to develop a sophisticated, advanced engineering, that of optical fiber in record time and with our own resources in the laboratory phases and in the industrial line. It is the result of the industrial policy employed by TELEBRAS [Brazilian Telecommunications, Inc], reserving this important area of the market for national industry. Understanding this enormous demonstration of confidence, the Condugel Corporation began its development work in this sector and its success is the result of the support always found in the TELEBRAS CPqD [Research and Development Center], which is made up of the most qualified scientists and of professors from UNICAMP [Campinas State University].

Thanks to the happy union of objectives of that corporation--truly national--with those of the CPqD, the country almost simultaneously achieved that which was achieved by more industrially developed nations: The complete command of the transmission of communications by means of light along optical fiber cables. That rare example of the domination of an unusual technology did away with the customary and onerous need to purchase technological packages and specialized know-how from abroad. This long step taken by Condugel in the manufacture of the first optical fiber cable in the Southern Hemisphere also eliminated the long-standing dependence on foreign sources.

The practical result of that considerable, efficiently made advance in the electronic field is the initiation of operations of the first optical fiber cable in Rio de Janeiro by CETEL, the Rio de Janeiro State Telephone Company.

It is part of the interconnection system between the telephone exchanges of Jacarepagua and Cidade de Deus. It is a historic event. It opens the doors wide to the road to a broad, rapid and effective development of telecommunications in Brazil. The possibilities now within the reach of our hands are so great that experts in the field become speechless when discussing them. To understand the phenomenon, it is enough to say that in the transmission of telephone conversations, a conduit as big around as an arm, packed with insulated copper wires, can already be replaced by another of a diameter smaller than that of a drinking straw and capable of carrying 10 times the number of telephone lines. Cable television is at hand for whomever wishes to take it up and be its pioneer. Also feasible already is the domestic or business videophone by means of optical fiber cable, which allows one to see what is taking place at the other end of the line, from the face of the other party to objects or items for sale at a supermarket. Satellite communications with aircraft in flight will be free of static from electricity and the human voice or navigation signals can arrive clean and crystal clear. In medicine, optical fibers will facilitate endoscopy, making a more efficient inspection of the interior of the human body possible, showing it clearly on a television screen. They will be pictures which may be transmitted far away over optical fibers also, pictures such as those obtained in a medical examination room in a remote region, which could be sent to a specialist at a large urban medical center, who could return that picture with his diagnosis on a reply channel of the same system. The optical fiber cable promises to revolutionize the distribution of data to and among computers, and it provides highly reliable remote control in hydroelectric powerplants, thermonuclear powerplants and factories, telemetry and telematics [as published]. To arrive at the production of the optical fiber cable, Condugel traveled a long road, but at a high speed, in these past 2 years. It was a road traced by the director of the corporation, Pedro Iacono, and driven by Engineer Dante Garnero, who was trained in physics, mathematics, engineering and electrical communications.

The promising background in the history of the corporation provided the incentive for the research. Condugel has a 25-percent share in the civil construction market with its lines of special products for energy and communications. This was achieved by competing in quality and credibility with the most powerful multinationals in the sector. Moreover, Condugel is one of the only manufacturers in the country of thermopair cables for instrumentation, signaling and control. Using national technology and capital, the development of its products for attending to new demands and formulations of the market has become routine.

As of 1978, the corporation began to study the feasibility of producing cables for telecommunications, despite the production supercapacity in the sector. However, its technicians did not intend to repeat what the other industries already making conventional cables for telecommunications were developing. Condugel did not lose sight of the trend in more technologically advanced countries, who were improving a means of transmission which was incredibly smaller and reliable. That means was optical fibers. Investing in new equipment, and using its own technological sources, Condugel designed and built a modern industrial line for the coating and drawing of optical fibers as a response to the demand for telecommunications cables with a higher productivity.

At the same time, the Optical Fiber Group of TELEBRAS was also accelerating its plans for the manufacture of optical fibers for telecommunications. To unite efforts, Condugel proposed joint work with the CPqD, concentrating isolated initiatives. Actually, the corporation always participated actively in the great Brazilian projects. Its name is closely linked with the hydroelectric powerplants of Itaipu and Tucurui, with the North-South power grid, as well as with mining projects (Carajas), petroleum prospecting on land and on the offshore shelves and with transportation, railway as well as subway, the latter areas are those in which quality is outstanding. After a rapid expansion in the 13 years of its existence, Condugel is represented by five industrial units in the country.

In all of them there is the effort to face the great challenges with the quality and research of new products. The optical fiber cable is one of those efforts. Through them, with the speed of light, Brazil advances toward the future of telecommunications.

8908
CSO: 5500/2292

BRIEFS

SATELLITE COMMUNICATIONS STATIONS--EMBRATEL [Brazilian Telecommunications, Inc] reported in Rio that on Thursday it will inaugurate three earth stations for satellite communications in Tabatinga, Tefe and Coari in the interior of Amazonas. Minister of Communications Haroldo Correa de Mattos, accompanied by State Governor Paulo Pinto Nery, will announce the initiation of operations by those units which will carry live pictures of the World Cup matches in Spain to the three cities, in addition to telephone and telex services. The ceremony will be held in Tabatina. Simultaneously, from Manaus, Telamazon will be inaugurating a number of improvements to the telecommunications system of the state. In the capital, the number of telephone terminals will be increased by 4,160; in Tabatina a telephone exchange will be inaugurated, in Benjamin Constant, a telephone exchange and a telephone booth, and between Tabatinga and Benjamin Constant, a UHF link will be installed. The company reports that at adjusted prices of last April, its expenditures on those three earth stations in Tabatina, Tefe and Coari were 595 million cruzeiros. Communications systems in those regions were rudimentary, consisting only of shortwave. Almost 90,000 people will benefit from the new systems. In Tabatina, the importance of communications resides in the fact that it is a border region (with Colombia and Peru) needing, therefore, more reliable means of telecommunications [Text] [Sao Paulo O ESTADO DE SAO PAULO in Portuguese 1 Jun 82 p 14] 8908

MINICOMPUTER PROJECTS--The Special Secretariat for Data [SEI] an agency of the National Security Council, approved two more projects for the manufacturing of minicomputers in the country: Racimec Racionalizacio e Mecanizacao Ltda will produce the Racimec-1800, and Elebra Informatica S/A will produce a serial printer. The approval was officially announced in a memorandum signed by the Special Secretary for Data, Octavio Gennari Netto. According to the memorandum, the Racimec-1800 should have a central processing unit developed on the basis of microprocessor Ziloc Z80, work memory available in Ram with 17 K bytes, with possibilities for expansion to 48 K bytes; memory for resident programs in ROM with 12 K bytes; interfaces for a video terminal; electronic keying, cassette type recorder, flexible disc unit with a capability for connecting up to four of those units and for a serial printer. Moreover, it must have an operational system, Scord, Monitor, interpreter and a compiler for basic [as published]. For the manufacture of the product, the SEI authorized the importing of integrated circuits which do not exist in Brazil of the CKD/International type, with the software to be developed exclusively in Brazil. At the requirement by the SEI, the manufacturing of the Racimec-1800 must be done without depending under any circumstances on foreign technology, a method the government found for protecting national companies, assuring them a reserved market free of the competition of multinationals. With respect to the serial printer, the SEI authorized the imports of motors, printing head, integrated circuits and other circuits which are known not to exist in Brazil. [Text] Sao Paulo O ESTADO DE SAO PAULO in Portuguese 26 Jun 82 p 27] 8908

CSO: 5500/2292

BRIEFS

ISRAELI-LEBANESE RADIO COOPERATION--At a meeting held yesterday between radio Director Gid'on Lev-ari and (Jan Azi), the director of the Free Lebanon Radio station, the two discussed a joint project for cooperation between the stations in subjects of entertainment and culture. A similar plan for cooperation is being discussed between the television stations of the two countries as well. [Text] [TA010931 Tel Aviv HA'ARETZ in Hebrew 1 Jul 82 p 2]

CSO: 5500/4730

PLANS FOR SATELLITE STATIONS DISCUSSED

Kuwait AL-WATAN in Arabic 27 Mar 82 p 3

/Interview with engineer 'Adil al-Ibrahim, director of Bureau of Wire and Wireless Communications: "Six Earth Stations to be set up in the Umm al-'Aysh complex by 1987"; date and place not specified/

/Text/ In 1969 the first station for wire and wireless communications was opened in the Umm al-'Aysh complex of earth stations which are located at a distance of 71 kilometers north of Kuwait City. This complex was designed to include six stations by 1987 under the plan of the Ministry of Communications, and an earth station to work with the new satellites by 1990.

In a meeting with engineer 'Adil al-Ibrahim, director of the Bureau of Wire and Wireless Communications, he said, "On 28 October 1969, the first earth station was opened in the region of Umm al-'Aysh. In 1981 the Ministry of Communications concluded an agreement with Neon Electric Company for a project to change the station's antenna so it would be coaxial, in addition to altering the amplifier system by means of a new set of advanced equipment. The present receiving system which works with low-sound amplifiers was altered with new parts. As a result of this alteration the antenna of earth station no 1 can work jointly with the fifth group of Intelsat satellites, doubling its receiving capacity.

Concerning earth station no 2, Mr al-Ibrahim said that it was opened on 27 March 1977 as a result of the expansion of commercial activities, which led to intensive telephone communications with the western part of the world, necessitating the construction of this station. The contract with Siemens Co. was signed in the Federal Republic of Germany to construct a second system of antennas in the same location.

He added that the antenna of the second station is pointed toward the satellite of the Atlantic Ocean and is working with the states of this region. It has a capacity of 276 telephone channels and two television channels. The station is also provided with a "speed" system which works by computer.

Earth station no 3, which was recently opened, was built to meet the needs of increased international communications between Kuwait and other states on a wide scale. Therefore Neon Electric Company was contracted to build a third earth station at a cost of 2.7 million Kuwaiti dinars. The station has a capacity of 324 channels, and its antenna is pointed toward the satellite in the Atlantic Ocean region.

On maintenance methods and control facilities, Mr al-Ibrahim said, "The earth stations in Umm al-'Aysh are directly linked with other distant earth stations by means of telephone and telex circuits. This helps maintenance workers to communicate with their colleagues in other countries to guarantee the continuity of work in the service. The operations of earth station no 1 are supervised and controlled by means of a central control panel which is operated by technicians around the clock. These panels give out warning signals in case of any error or malfunction in the apparatus. This helps those who supervise the panels to detect malfunctions immediately and repair them. Earth station no 3 depends on a more complex regulatory apparatus, that is, the branch system of the station administration. It consists of a regulatory system operating by the microcomputer of the control center supervising operating conditions of the communications equipment of the satellite and its dependent systems in earth station no 3. The SMSS system also regulates the system and equipment of the earth station on a constant basis. It also transmits and receives the barometric readings of the wave. This system limits malfunction when it occurs by adding its special symbol on the corresponding panel with the emission of electronic beeps. A computer prints out detailed reports on the malfunction, including the time of its occurrence, specifying the hour, minute and second, in addition to the location of the malfunction and a report on the condition of the regulatory apparatus."

On the communications satellite, he said it consists of a small linkage station located at a height of 22,300 miles above the equator. These satellites move in a fixed orbit around the earth, at the same speed as the earth's rotation. It therefore appears from the earth to be still. The satellite usually derives its operating power from the sun by means of solar cells. When the sun is absent, energy is supplied by special batteries due to the fact that the sun's rays are hidden from the satellite by the earth. He said that the satellite receives signals of the transmitting waves from the earth stations carrying the telephone conversations, cable and television messages in a range varying between 5.9 megahertz and 6.2 megahertz and 4.2 megahertz to the earth receiving stations. At that great height the satellite can cover one-third of the earth's surface. Therefore there are three satellites set in fixed geographical orbits, so that the entire surface of the earth is covered. The satellites are called by their location with respect to the earth: the Indian Ocean satellite, the Pacific Ocean satellite, and the Atlantic Ocean satellite.

In view of the density of the movement in some stations, more than one satellite has been used in one region, so that in the Atlantic region there are three equivalent satellites: MB1, MB2, and B-Primary.

At the conclusion of the interview, Mr al-Ibrahim said that the fourth Landmarsat station in the Umm al-'Aysh region will be the coastal Landmarsat earth station, which is expected to start operating at the beginning of

1987. It will have a capacity of 40,000 telephone circuits. This power will be derived by re-using the same frequency range up to six times by means of a division of space and polarization, and by using the method of numerical transmission on a wide scale in addition to the satellite's conversion capacity and its ability to use new frequencies. By 1990 it is expected that the Umm al-'Aysh complex will include an earth station to work with the new satellites.

9397
CSO: 5500/4715

GULF COOPERATION IN TELECOMMUNICATIONS

Kuwait AL-SIYASAH in Arabic 31 Mar 82 p 5

/Article: "The GCC States' First Meeting on Training in Wire and Wireless Communications Concluded its Sessions Yesterday; Proposals to Exchange Training Programs and Their Particular Courses, to Prepare, Develop and Unify Training Programs in the GCC States, and to Organize Study Sequences"/

/Text/ The closing session of the first meeting of the Gulf Cooperation Council /GCC/ states in the field of training in wire and wireless communications met yesterday morning in the Kuwait Sheraton. It issued the following resolutions and proposals:

1. To exchange training programs, the courses particular to them, and the audio-visual methods that assist training.

2. To prepare, develop and unify training programs in the GCC states.

3. To prepare and organize study sequences, and carry out studies in the various fields of specialization connected with training.

4. To order efforts in the area of Arabicizing training courses and programs as much as possible, and to continue the activities which were started pertaining to Arabicizing scientific and technical terms related to the field of communications; to work to unify them in the member states.

5. To develop faculties, institutes, and training centers in the field of communications for the member states; to study the possibility of setting up a specialized technical school in the field of wire and wireless communications for the GCC states.

6. To prepare detailed surveys and planning studies for the required technical framework to carry out future plans for developing training programs in the GCC states.

7. To issue and exchange specialized journals and publications on training.

8. To exchange experts and groups of teachers, trainers and technicians between member states for training purposes.

9. To prepare, train and equip trainees from among the citizens of the GCC countries.

Those who were assembled decided to form a task force consisting of representatives from Bahrain and Kuwait, to do the following:

- to list the needs of the administrations of the member states for trainees, ascertaining the ability of these administrations to provide the necessary preparation for training.

- to clarify the training capabilities of faculties, institutes, and training centers in the member states, and the extent of their ability to train the required technical cadres.

- the task force takes up its duties starting 1 May 1982 with the understanding that it will complete its work by 31 July 1982 at the latest.

- the central training administration in Kuwait is responsible for following up on the work of the task force and informing the GCC states of their findings.

10. The second meeting of the administrations for training in wire and wireless communications of the GCC states will be in October 1982 in the headquarters of the general secretariat of the GCC.

His Royal Highness the Emir sent an answering cable of thanks to the president of the first meeting of the GCC states in the field of training. It reads:

"Brother 'Isa al-Rifa'i, president of the first meeting of the GCC states in the field of training in wire and wireless communications, Kuwait.

I received your kind cable which you sent on the occasion of your first meeting in Kuwait. I am very pleased to participate with you and the other brothers who are participating in this meeting, with the warm feelings that accompany it. I wish you all continued success, and for the citizens of the states of the Gulf Cooperation Council an increase in knowledge and training, the adoption of modern organizations in the field of its technical operations, and the raising of their capabilities. With my greetings, Jabir al-Ahmad"

His Royal Highness the heir to the throne and the president of the cabinet, Shaykh Sa'd 'Abdallah, sent a similar answering cable of thanks. It reads:

"Engineer 'Isa al-Rifa'i, president of the first meeting of the GCC states in the field of training in wire and wireless communications:

"We received with pleasure your cable on the occasion of the first meeting of the GCC states in the field of training in wire and wireless communications in Kuwait. We thank you and the presidents and members of the delegations for your good sentiments. We hope for success and noble goals for your meeting, for the good of our homeland and our people. With best wishes,

"Sa'd 'Abdallah al-Salim al-Sabah
Heir to the Throne and President of the Cabinet"

The Minister of Social Affairs and Labor and Ministers of Housing, Hamad 'Isa al-Rajib, sent a similar answering cable of thanks. It reads:

"Brother 'Isa al-Rifa'i, president of the first meeting of the GCC states in the field of training, Hilton Hotel.

"I gratefully received your kind cable expressing the noble sentiments of you and your colleagues, the brothers who are presidents and members of the delegations of the sister states participating in the meeting, hoping that you will convey to all my true greetings and sincere wishes that this meeting will realize the goals it hopes for. As for the work we have done on behalf of our brothers, it is only a small expression of our feelings of brotherhood toward the states and peoples of the Gulf Cooperation Council. May God grant you success."

Hamad 'Isa al-Rajib
Minister of Social Affairs and Labor
Minister of Housing

9397
CSO: 5500/4715

BRIEFS

TELECOMMUNICATION LINK--Oman is the vital connecting point, of a link-up planned by the Islamic Telecommunications Union and now in an advanced planning stage, reported the TIMES OF OMAN recently. Oman's key role was seen in an official map distributed among delegates at a meeting of Kuala Lumpur in April to discuss the draft constitution of the union. A spokesman for the Oman government said that the Islamic Telecommunication Union will be formally launched in October this year at the general assembly of all states of the Islamic conference Organisation to be held in Riyadh. He said the meeting decided to form four geographical zones to collect information and data that may be required to build a unified telecommunications network. Zone A includes Iran and the Arab countries, Zone B, Turkey and Arab states, Zone C, Arab states in the Maghrab and Zone D includes non-Arab states in Africa. Owing to its geographical position Oman has been chosen to be the connecting link for transmissions between Asia and the Middle East. Aims and objectives of the Islamic Telecommunications Union, which is being formed under the patronage of the Islamic Conference Organisation will be to cooperate efforts to achieve cooperation among member states to develop their telecommunications network. The meeting discussed in detail various clauses of the draft prepared by Saudi Arabia and incorporated a number of suggestions put forward by delegates. The meeting discussed ways to foster closer telecommunication links among the member states. Matters pertaining to training, exchange of expertise and improvement of telecommunications services were also discussed. [Text] [Kuwait ARAB OIL in English No 6, Jun 82 p 52]

TELEPHONE EXCHANGES--The Italian Fish Standard ITI Company, recently won a contract for the construction of four new telephone exchanges in Oman. The contract, valued at 4,526 dollars, was signed by the Oman Minister of Posts, Telegraphs and Telephones, and includes the construction of exchanges each with 1,000 lines. Work on the four exchanges is expected to be completed within six months. The contract is part of a larger project which aims to provide 44,000 new telephone lines during the next four years, as part of Oman's second five year plan. [Text] [Kuwait ARAB OIL in English No 6, Jun 82 p 52]

CSO: 5500/4727

FEDERAL REPUBLIC OF GERMANY

STATE SECRETARY ON BUNDESPOST TELECOMMUNICATIONS SERVICES

Duesseldorf VDI NACHRICHTEN in German 30 Apr 82 p 2

[Interview with State Secretary Dietrich Elias, Dipl Eng, date and place not given: "German Post Office to Make Timely Expansion of Services"]

> [Text] Transmission of data between storage typewriters or computers was among the much-discussed topics during the Hannover Fair. Whenever out-of-house information exchange between individuals or businesses has to be transmitted via electrical lines, the services of the German Federal Post Office [DBP] are required. If the DBP withholds authorization to connect equipment to its telecommunications network, a development may not get beyond the prototype stage. Questions on such topics as which telecommunication services are already offered by the DBP and how they satisfy the desires of businesses and how the ministerial staffers project the future expansion of DBP services were answered by State Secretary Dietrich Elias in an interview with VDI NACHRICHTEN. Dietrich Elias is one of the two state secretaries of the Federal Ministry for Mail and Telecommunications.

VDI NACHRICHTEN: During the Hannover Fair, manufacturers are displaying in several exhibit halls data processing equipment which to a great extent is suitable for remote data processing. What services can the DBP offer data processors?

Elias: In addition to the datel services of the telephone system and direct-call connections, I should like to mention the modern services of the datex network. The wire-transmitted Datel-L-Service offers in many cases suitable solutions for both batch and dialog applications. The courier-forwarded Datex-P-Service is extremely well suited for dialog purposes and also lends itself to batch transmission. Transfers can be made from both the telephone network and the Datex-L-Network to the Datex-P-Network. These systems provide many alternatives for economical data transmission.

VDI NACHRICHTEN: Can the DBP satisfy the demand for circuit capacity in direct-dialing long-distance service and when will this network be further expanded?

Elias: The DBP network is being expanded continuously. To this end, investments for the telephone network have been increasing from about DM 1 billion in 1977 to 3.3 billion in 1982. Also, over DM 3 billion will be invested annually in the telephone network over the next few years to clear the bottlenecks which arise during the low-rate period and under certain traffic conditions. With these gigantic investments, German industry will be loaded to the limit of its supply capacity.

Digital Transmission Stations

VDI NACHRICHTEN: Already available to businesses are transmission stations which can relay speech and data together, yet the DBP carefully separates telephone, teletype and data circuits, why?

Elias: Different signal sources, for example telephone as analog and teletype as digital, have in the past led to separate networks.

Upon converting the telephone system to a digital network, an integrated-service network will be possible. In order to gain experience as fast as possible, the DBP plans to set up a provisional 64-kbit model network serving a limited number of subscribers. The technical base for this model network will be the present integrated teletype and data network. In addition, the planned telecommunications satellite offers the possibility of also integrating broad-band services. In the long term, we are, of course, planning to integrate all telecommunications services in a comprehensive glass-fiber network.

VDI NACHRICHTEN: There is also the teletex service for transmitting text between electronic storage typewriters and other equipment for text processing and assimilation. How is the expansion of this service proceeding?

Elias: At this-year's Hannover Fair, the DBP, together with the manufacturers involved, exhibited for the first time teletex and equipment of the various manufacturers with worldwide compatibility conforming to the new international CCITT standard.

With the advent of the CCITT standard and its associated compatibility, the most important step for international teletex service has been taken.

The DBP plans, therefore, at mid June this year to convert the entire teletex network to the newly achieved international standard. Parallel to this, the teletex equipment currently used in the German network by about 650 subscribers will be converted from the provisional national standard to meet the international standard. After the conversion, only end equipment conforming to the new CCITT standard will be connected. I anticipate 40,000 teletex connections within 5 years and 130,000 within 10 years.

VDI NACHRICHTEN: To make computer power available at the work place, businesses will install more visual display equipment and small computers. Currently, there is a competition between the offerers of cable networks such as Ethernet [apparent omission in text] in which equipment can be plug-connected and provide the vendors of digitial speech, text and data exchanges functions similar to those of the well-known telephone extension equipment. Will the DBP lose a market here? Will DBP also offer such facilities in the future?

Elias: The concepts mentioned are basically technical variants for solving the same problem. The DBP is however not tied to a particular technical solution. Currently, a market for such universal equipment is not yet discernable to any significant degree. Whether the DBP will get involved has not yet been decided.

Private Telecommunications Satellite

VDI NACHRICHTEN: If companies set up their own internal broad-band networks, they could also transmit this information to distant places via private satellites. What is the DBP doing in this regard?

Elias: According to present information, the satellite services will be integrated services and thus also contain telephone cannels. The DBP will not withhold these services from the Germany economy. In accordance with its legal mandate, it will of course offer them to the public--and thus to interested businesses also--as public services. For this purpose, the DBP plans to operate its own telecommunications satellite.

VDI NACHRICHTEN: The DBP will officially introduce CRT text in 1983. Was the introduction of these services announced before completion of the field tests in Berlin and Duesseldorf because it was shown that CRT text will be used mainly as an information and sales medium between companies and branch offices rather than for the satisfaction of the information requirements of individual subscribers?

Elias: The Federal Government decided in June 1981 to introduce CRT text for purposes of individual communication. In accordance with this decision, the DBP is preparing the technical basis for introducing CRT text countrywide after 1983.

The CRT text test has been underway in West Berlin and Duesseldorf since June 1980. Based on initial findings from the associated scientific studies, it can already be stated that there is a high interest in both commercial and private applications, for instance in home banking and home shopping. The same is increasingly true for the information services already offered. The demand in both the business and private sectors for economical data communications was one of the basic reasons for deciding to introduce CRT text.

VDI NACHRICHTEN: Several CRT text suppliers are dissatisfied with the rate structure. Memory space is too expensive; a final ruling is still pending. To what extent are DBP considerations involved?

Elias: The storage area fees currently under discussion are still based on the old CRT text concept. With the buildup of restructured CRT text centers, the storage area fees will also have to be discussed again. Final statements cannot yet be made in this connection.

VDI NACHRICHTEN: As a private subscriber to the CRT text service, I need a telephone, an appropriately equipped TV set and a modem. The DBP requires that this modem be external to the other equipment. Why?

Elias: The subscriber's modem provides an interface with the telephone network, independently selects the CRT central and identifies the customer. With these functions--especially the circuit interface function--the modem clearly falls into the DBP's area of responsibility; it, of course, must fulfill service and repair obligations. If the modem were housed inside the TV set, the assignment of responsibility in case of trouble would be extremely difficult.

VDI NACHRICHTEN: In Great Britain, the telecommunications branch of the post office has by law received private competition in all telecommunications services which it has not been able to provide in the past for technical reasons. Is there a threat of similar developments in the FRG?

Elias: A change in the laws controlling the DBP does not appear to the Federal Government to be required at this time. In contrast to the earlier conditions in Great Britain, there is considerable freedom for private offerers in the FRG: Just consider the telephone extension equipment; add-on equipment for the hand set and the teletex equipment.

A More Liberal Market for End Equipment

VDI NACHRICHTEN: Many manufacturers would like to see a liberal end-equipment policy, for example a telephone jack into which all sorts of telephone and peripheral equipment could be plugged. Do you foresee liberalization in this area?

Elias: The end-equipment market in Germany is extremely liberal. In many areas such as in the case of PBX and telefax equipment, the DBP is in competition with private firms and in some cases holds only a small fraction of the market. Also, relative to new services, a decision will have to be made on a case-by-case basis as to whether the DBP will participate in the end-equipment market at all. Only the telephone equipment at the primary telephone connection will be left solely to the DBP. This cannot be separated from network operation because the telephone set controls the structure of the switching network and assures transmission quality. To define an interface which provides greater freedom is not possible with today's technology. And even with changed boundary conditions, such as a digital telephone network, the prerelease of technical telecommunications standards will be required for designing the end equipment. For this reason, completely unconstrained attachment of arbitrary equipment which is not subject to a certification test will probably never be considered.

VDI NACHRICHTEN: Is it conceivable that the DBP will install instead of a telephone connection a modem as basic equipment to which arbitrary communication equipment can be connected? When will DBP install a simple telecommunications jack?

Elias: A modem interfaces digital signals with the transmission characteristics of an analog telecommunication network. It can be used only for the operation of data transmission corresponding to the particular interface conditions in accordance with the CCITT standard.

No matter how appealing the concept of a simple jack, the solution will never be that simple in the telecommunications area. How the technical solutions associated with the integration of the various services will look--especially with a glass-fiber connection for all telecommunication services--simply cannot yet be imagined.

Procurement Policy Fundamentals

VDA NACHRICHTEN: The DBP has announced that it will establish several local glass-fiber networks (BIGFON) which will be able to transmit telephone conversation; text and data information; television and radio programs and TV-telephone. Has a date been established after which only glass-fiber, instead of conventional, cable will be laid?

Elias: No, a final decision concerning type, scope and date for the general introduction of glass-fiber technology into the telecommunications network of the DBP has not yet been made. This decision must finally be made on the basis of an economic feasibility study, and adequate reliable data for this is not yet available. Of course, we are assuming that from the volatile technological development in this area, glass fiber will mature as a full-fledged replacement for copper cable so that its use even for narrow-band services such as telephone will be of interest. Additional possibilities such as TV-telephones would then emerge without the construction cost of a new network.

VDI NACHRICHTEN: The DBP does not itself manufacture equipment and installations; it procures them. It is not always domestic companies which supply this equipment, for example telecopiers and CRT-text computers. Can you tell us something about how procurement decisions are made?

Elias: The notion "domestic companies" is a delicate subject. To us it means companies which manufacture the candidate product in the FRG or West Berlin and thus provide jobs in our country.

The foundation of the DBP's procurement policy can be summarized thus: The FRG's economy and jobs are strongly export-dependent. We cannot afford to be subjected to the import restrictions of other countries; thus, we should not advance the cause of protectionists in other countries through our own import restrictions. Thus, the DBP basically buys those products which have the best price-performance ratio for the expected service conditions.

There is of course on exception: That is the core area of telecommunication technology, for example, public telephone technology. We are not now considering involving foreign companies in this area so long as the German communication industry continues to offer technical and economic solutions equal to world standards. This exception will be maintained until agreements relating to a balanced exchange of goods of this type are worked out within the framework of international liberalization of public procurements, for example, within the framework of the EC or GATT.

Certification Center Created

VDI NACHRICHTEN: In the telephone market one often hears the derogatory term "court vendor" to the DBP. For example, the special report of the Monopoly Commission of February 1981 deals with four development firms and eight licensees. How can the dichotomy between domestic procurement policy and competitive procurement be solved?

Elias: The DBP operates the opposite of a closed-shop policy.

In the sector "telephone equipment for primary public installation," we use what is known as the "set-aside process." In this process, an attractive fraction of demand--25 percent, for instance--is set aside for competitive bidding to establish a price, and the "set-aside" fraction is awarded to the competing companies through private contracts. In this manner, competitive procurement, on the one hand, is connected with a certain constant level of employment, on the other. The Monopoly Commission has saluted the procurement method of the DBP. Through this method of competition, economical procurement is assured involving only domestic suppliers.

VDI NACHRICHTEN: What actually happens with reports like those of the Monopoly Commission other than that they are read and passed along? Can you cite an example wherein the citizen can see the direct influence of investigations or hearings on a law, measure or decree?

Elias: First a general comment:

The Monopoly Commission has contributed to clarifying the complex problems of telecommunications with their special investigations. In this regard, it has once again been shown that a detailed, thorough involvement with the roles and missions of the DBP leads to discrediting the list of categorical and usually unfounded accusations.

The report has engaged parliament and the Federal Government and has also led to actions in the DBP which on occasions have gone even beyond the proposals of the Monopoly Commission. An example which comes to mind is the establishment of a certification center for telecommunications equipment outside of the FTZ, whereby the separation of procurement and certification functions are very clearly documented. Also the recommendation of the Monopoly Commission to institute a special legal-use claim to the certification of private telecommunications facilities will presumably become law by the end of 1982. It will also standardize the conditions under which a legal claim to such certification exists.

9160
CSO: 5500/2267

FEDERAL REPUBLIC OF GERMANY

BUNDESPOST PLANS TO TRANSMIT DATA BY SATELLITE BY 1984

Munich SUEDDEUTSCHE ZEITUNG in German 15 Jun 82 p 21

[Article: "Post Office Will Get Letters From Heaven"]

> [Text] Bonn--The FRG is standing at the beginning of a new era of electronics information transmission. It is possible that the German Federal Postal Service [DBP] will complete various domestic communication links (Berlin traffic, high-speed data traffic, video conferencing, etc.) via its own new national telecommunications satellite after the spring of 1984. This came to light recently during the course of a 1-week trip to the United States by Postal Minister Hans Matthoefer. The U.S. telecommunications company, Western Union Corp, offered to sell Matthoefer its Westar 3 telecommunications satellite which the company has used since 1981 for relaying domestic American telephone traffic.

The DBP, which is very interested in the American offer, would be entering with this satellite an area of modern communication transmission which until now has been considered as largely unattractive for the relatively small FRG with its dense telecommunications network. Even though the DBP has for years used the American telecommunications satellites for relaying intercontinental picture, sound and data traffic from its ground-based radio stations in Raisting and Usingen, the use of a satellite for national telecommunications traffic appeared superfluous up to the end of the 1970's. The situation has changed in recent years, however, due to the greatly increasing demand for high-capacity data transmission capabilities which focus more on point-to-point traffic and less on wide-area network traffic.

Instead of Glass Fibers

The application of a national telecommunications satellite offers in such cases important technical and financial advantages compared to expanding the postal cable and microwave networks. In the future, any postal patron who would like to make industrial use of certain data and video services can, so to speak, "pull them out of the sky" with his own parabolic antenna having a diameter of 3 to 5 meters. This is a process which has been successfully operated for several years in the United States by large telephone companies and the Washington specialist firm Satellite Business Systems.

In this connection, it is important for the DBP that with the domestic satellite a part of that demand can already be covered for which a wide-area glass-fiber network will be strung in the FRG during the next decade. While the telecommunications satellite--in contrast to future direct TV reception via satellite--probably cannot be considered for use by individuals, it already offers German commercial users the manifold transmission capabilities of a glass-fiber link. This holds both for extremely fast data exchange and for all varieties of picture transmission--from the engineering drawing transmitted in seconds, to the color video conference between a home office and its branch offices at home and abroad. Video experts in the United States maintain in this connection that at least a quarter of all time-consuming business trips can be saved with the aid of such TV conferences.

For the DBP itself, the domestic German satellite is of special interest for two reasons: first, it could significantly contribute to unloading the telecommunications network between the FRG and West Berlin for which there is a shortage of microwave channels; second, it could ring in a completely new age in the mail area in which urgent letters could be transmitted via satellite from one post office to another in the future. This would make it possible to automate and transmit in fractions of a second the DBP's "faxed" teleletters, a mail system which has been under development since 1981 at considerable expense and which is still unreliable. A letter presented at post office A would with the aid of a precoded address be relayed by satellite to receiver post office B where it would be automatically enveloped and either delivered immediately or picked up by the addressee. A large part of the physical transportation of mail could be saved thereby, significantly contributing to the financial relief of the deficit-operating postal system.

German Proposal

No matter the outcome of the negotiations between the DBP and Western Union Corp concerning the sale--the cost is put at $70 million--of the used Westar 3, a German consortium led by Siemens AG will submit to DBP a concrete proposal for a national telecommunications satellite by this fall. However, the earliest launch date with the European rocket Ariane would be 1986. A decision from DBP is possible by the end of 1982. According to Western Union, the Westar 3 still has enough fuel so that it can be moved from its present position over North America to an optimal position for the FRG. The satellite, whose mission will be taken over by a larger Westar at the beginning of 1984, still has about 10 years' life left.

Teletex with the United States

In addition to the question of the satellite purchase which the postal minister discussed last week with representatives of Western Union, the latter agreed to complete the first intercontinental teletex circuit linking the FRG with the Western Union network. Further, Western Union agreed to buy both the transmission and end equipment from German suppliers. The direct teletex service--the transmission of complete typewritten pages in fractions of a second--between the United States and the FRG is expected to start by fall.

9160
CSO: 5500/2275

SATELLITE TV TESTS STARTING IN ROVANIEMI

Helsinki HELSINGIN SANOMAT in Finnish 12 Jun 82 p 8

[Article: "TV Satellite Tests in Rovaniemi Also"]

[Text] The Postal and Telecommunications Administration does not intend at least for the time being to heed the urging of the Communications Ministry to cease its tv-programming satellite tests. The central office has sent the ministry a letter in which it justifies the necessity of its program testing. It considered it imperative that cooperation with Helsinki TV be continued and tests also be started in Rovaniemi.

A couple months ago the Communications Ministry sent the postal administration a letter in which it strongly disapproved of the use of state funds for tv-program reception testing by means of an OTS-satellite. The ministry urged the postal administration to bring an immediate halt to this venture.

The postal administration now considers that the Communications Ministry became involved in this issue too late. The postal administration decided to commence experiments in January already and the tests themselves commenced in March. HTV [Helsinki Television] has informed the postal administration that a possible violation of the contract would result in a demand for compensation and if necessary legal action.

In concluding a contract both parties proceeded from the fact that the tests will continue as long as the OTS-satellite is operational, emphasized the postal administration. In addition, the postal administration points out the negative reaction of viewers if programming is interrupted before the "natural death" of the OTS-satellite.

'Comparative Data from Rovaniemi'

Moreover, the receiving equipment has been delivered and installed in Rovaniemi. The postal adminstration considers it imperative that this equipment be used also. In this way we will be able to obtain good comparative data for the tests in Helsinki. In addition, the postal administration considers that satellite-tv programming in the Rovaniemi cable network would give the general public a more positive impression of state-run operations.

The Communications Ministry in its letter referred to cable television legislation currently under consideration. According to the ministry during the preparation phase of this legislation it does not make any sense to initiate new forms of cable television with the consent of the government.

The postal administration considers that it is not a question of an essentially new form of cable television operations in this experiment. In addition, the postal administration emphasizes that the experiment cannot comprise the basis of a permanent system or legislation because of the short life span of the OTS-satellite.

Postal Administration Wants To Be Involved

On the other hand, the postal administration points out that if it is not actively involved in satellite program transmissions, it could end up relinquishing this activity to some other organization.

In its letter the postal administration provides a detailed account of the economic and technical advantages of an extensive cable television system in comparison with joint antennas for individual housing units. In its letter the contral office considers that television satellites will increase the need to establish state-run wide-sector local networks and will also provide a means to market them.

10576
CSO: 5500/2265

FRANCE

FINANCING SEEN AS KEY TO CIT-ALCATEL-INDIA CONTRACT

Paris L'USINE NOUVELLE in French 27 May 82 pp 62-63

[Article by Eric Leboucher and Eric Lecourt: "The French Line"]

[Text] The scope of the CIT [International Telephone Company]-ALCATEL [Alsatian Company for Atomic, Telecommunications and Electronic Construction] contract in India confirms the competence of the French group in the domain of telephone equipment. It also illustrates the new relationships France seeks to establish with the Third World.

The French North-South cooperation policy being advocated by Francois Mitterrand entails the transfer of our technological know-how to countries that are seeking their industrial independence. Mexico, Algeria and, above all, India are among them. To succeed on the Indian terrain, France is calling upon her experience in aeronautics and telecommunications.

First contract: The Mirage 2000. At the end of March, the French (Dassault, Thomson-CSF [General Radio Company] and SNECMA [National Corporation for Aircraft Engine Design and Construction] were the successful bidders over the British and the Soviets. They were awarded the contract for the delivery of 40 planes to the Indian Armed Forces and an option on a manufacturing license agreement covering the production of 110 additional planes. With French assistance, India plans to build these Mirage 2000's in the Hindustan Aeronautics United plants at Bangalore, where the Franco-British Jaguar plane is already being assembled.

Second operation: The telephone equipment contract. Last week, the CIT-ALCATEL group, a subsidiary of the CGE [General Electrical Company], signed a contract which should finally be initialed by the end of summer. The contract is in two parts. The first part, amounting to 1 billion francs, concerns the furnishing of time-division telephone exchanges with an overall capacity of 200,000 lines and the building of two plants: One at Hosur capable of producing 500,000 lines, and the other at Palghat with a capacity of 30,000 lines, both under French license. The second part, in the amount of 2.2 billion francs, concerns French exportation of the exchanges needed over the next 5-7 years pending the construction of the plants and their operation at full output.

Financing a Decisive Factor in the Negotiations

The overall sum of the contract--3.2 billion francs--is covered to the extent of 50 percent by loans at 7.5 percent interest, and to the remaining extent (50 percent) by loans at market rates. Here again, the financing put together by the French was one of the decisive factors when it came to the final round of talks. One month ago, in the negotiations on the manufacture of a small Indian automobile, the French financing package lost out against that of the Japanese. And Suzuki won out over the "gotha" of the automobile builders.

Financing will still be a determinative factor in the forthcoming contract, the Indian telecommunications authorities--who are planning to install 1.5-2 million new lines per year (the current total is only 1.7 million lines for 650 million inhabitants)--having already launched another similar request for bids. The results of this bidding will not be known until next year.

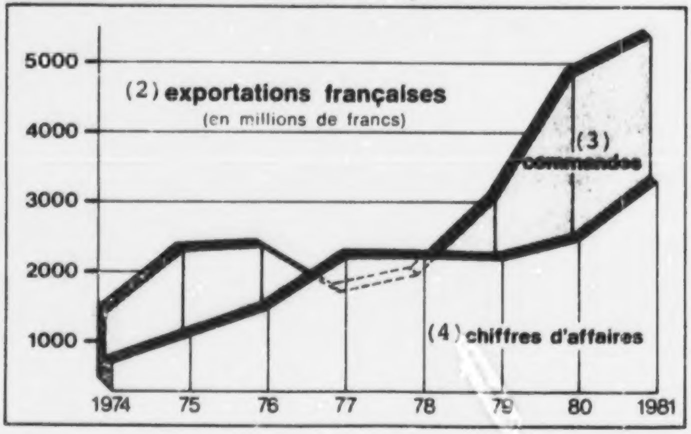
First Big Contract in Asia

Will CIT-ALCATEL be the winner of it all? There is no assurance that it will. Generally speaking, countries seek to have at least two suppliers to maintain competition and guarantee the certainty of supplies. But be that as it may, the management of the group is happy: "It is our first big contract in Asia, a continent that now represents one-third of the available world market." Available, that is, outside of captive markets like Germany and France, which reserve their domestic markets to their own national manufacturers.

The French, who for the past 3 years have been making attractive breakthroughs into countries as diverse as Egypt, Lebanon and Ireland, had hesitated to try to go into Asia, considering those countries to be too distant. Meaning too close to the Japanese, their most formidable competitors together with the American ITT and the Swedish LM-Ericsson. Several months ago, however, they were able to take the measure of the stakes involved by way of a small contract signed with Sri Lanka. To penetrate into Malaysia, CIT-ALCATEL acquired a one-third interest in the local Fleet Communication group. Fleet then responded, in behalf of CIT, to the Malaysian PTT's request for bids. But this association approach, indispensable though it is, is a lengthy, costly and risky thing to put into operation. Evidence of this is the fact that the Malaysian contract is about to be awarded to LM-Ericsson, after an initial part was won by Japan's NEC [National Electrical Company] in association with another local group. Despite the trips made by Louis Mexandeau, minister of PTT, to Djakarta, the Indonesian program is in serious danger of eluding the French and falling into the Siemens basket.

The Indian contract therefore comes in the nick of time. It will serve as a "reference" on French technology in this part of the world, in the telephone domain--a sizable request for bids has just been launched in Thailand--but also with respect to the related electronics and telematics markets.

Following the Mirage 2000 contract, this new success shows that the big French groups are prepared to play the technology transfer card in the developing countries. In India, several PME's [Small- and Medium-Size Businesses] have already explored this route of associating with local partners.



(1) LE DECOLLAGE FRANÇAIS EN 1979

Key:

1. The French "Lift-Off" in 1979.
2. French exports (in millions of francs).
3. Orders.
4. Annual turnover.

In 1979, Thomson and CGE "lifted off," responding to requests for bids with a time-division technology they had mastered. In 1980, the French share of the available market was 6 percent.

9399
CSO: 5500/2254

TELECOMMUNICATIONS STUDY CENTER MAKES TECHNOLOGY AVAILABLE

Paris L'USINE NOUVELLE in French 27 May 82 pp 75-77

[Article by Nicole Grange: "The Proteges of the CNET"]

> [Text] Large enterprises will no longer be the only ones to benefit from the CNET's [National Center for Telecommunications Studies] state-of-the-art technology and its patents: The CNET is now making the results of its work available to the PMI's [Small- and Medium-Size Industries]. A way of reviving competition and developing innovation.

"CNET technology for sale." "The CNET is offering... " The CNET is actually seeking to market its inventions. Particularly--and it is a recent thing--by way of the PMI's. Possessing state-of-the-art techniques, as it does, and a portfolio of patents developed in the course of its research work (the Center is devoid of any manufacturing mission), it is placing the results of its work at the disposal of industry.

These technology transfers are not something new: They have even been a standardized thing for several years now, but essentially limited to the large enterprises working in the domain of telecommunications. Thus Thomson-CIT [International Telephone Company]-ALCATEL [Alsatian Company for Atomic, Telecommunications and Electronics Construction], Philips, MATRA [Mechanics, Aviation and Traction Company]... were partaking of the work of the CNET.

From now on, the CNET will be catering to the PMI's. This new approach is not a totally disinterested one: This opening toward the smaller enterprises is intended to reinvigorate competition and develop innovation. For, the big manufacturers are not always in a hurry to develop new techniques if they cannot see ahead of them a wide-open market and assured production... The PMI's are more flexible and can react more rapidly to market stimuli, indeed even arouse demand.

It was the PME's [Small- and Medium-Size Businesses], for example, that opened up the market for videotex. Andrei Landau, director of marketing for the XCOM [expansion unknown] company (30 persons at Grenoble), which specializes in microelectronics studies and applications, recalls that at the inception of telewriting the first market studies indicated a bottleneck. A few months later, the demand surfaced. Andrei Landau's conclusion: "Applications were found for it in the domain of video-conference."

Another point of interest in working with the PMI's: Since contacts take place directly with the decision makers, decisions are taken more rapidly.

Added to this is the policy intent to get the other telecommunications services to cooperate with the PMI's. The DAII [Directorate of Industrial and International Affairs] has thus also opened up its bidding for studies and procurements to the PMI's. True, 90 percent of today's studies and technology transfer markets are still being shared among the big enterprises, but officials of the CNET estimate that 15 to 20 percent of the techniques to be industrialized could be taken up by the PMI's. "Particularly in certain areas: Softwares, terminals, equipment for small private networks, multiservices... to diffuse techniques that interest sectors other than telecommunications," explains Andre Nizeri, head of the CNET's patents and invention applications service.

The flat-screen technique, for example, has interest in telecommunications for the manufacture of the electronic directory, but the graphics data system can also serve all electronic industries.

A few PMI's have already acquired licensed rights from the CNET. They are for the most part located in the Paris region, notwithstanding the presence of CNET laboratories at Lannion, close to Rennes, and at Grenoble. The Dyna Company, in Paris (60 persons and 12 million francs annual turnover), for example, has bought a time-signals reception system. The CNET had developed a method for the transmission of time signals by radio, and was seeking an enterprise to industrialize it. Dyna, which specializes in time measurement and the manufacture of industrial clocks, obtained the rights under license to manufacture and market the receivers. The contract, priced at around 20,000 francs, provides for the payment of a royalty (4 percent) on each piece of equipment sold to other than the government.

More often than not, licensed rights are not exclusive. Technical assistance is provided by CNET engineers. The enterprise is provided with the drawings and even the prototype as built by the CNET. It is then up to the enterprise to complete it or improve it if required. But the enterprise remains the the master of its fabrication and of its market outlets. Based on this CNET technology, Dyna has brought out two equipments: A clock that displays the time and a data processing card that receives, decodes and retransmits the time signals. "This patent has opened up outlets for us," says Pierre Meurein, the manager. "Every day we find new applications and new clients: The armed Forces, government administrations, large enterprises, EDF [French Electric [Power] Company_ to equip their meters. The export outlook is interesting: Within 1 year from now, we expect to be realizing 50 percent of our annual turnover from this activity," he adds.

AML [Mathematical and Software Applications], a small enterprise that develops data processing methods and programs, situated in the Paris region, expresses the same satisfaction. It bought licensed rights from the CNET on the latter's software for synthesizing speech from written text. "For a PME, the use of CNET patents offers real advantages: They are excellent bases on which to develop one's own research," explains Arnault Henri-Labordere, manager, "and this enables furthermore to have access to interesting market demands."

Since this agreement, AML has gone into word processing. "A market niche that will offer fantastic outlets: The demand for computer terminals will multiply when these are able to speak," says Arnault Henri-Labordere enthusiastically.

The CNET a Research Laboratory for Enterprises

Technology transfers take place also by way of study contracts, which can subsequently lead to the granting of licenses. The study contracts awarded by the DAII are much sought after by the enterprises, involving as they do financing for their studies and fabrications. They relate to the specific needs of the government telecommunications services, but can give rise to other applications. For a long time, they were reserved to the large firms; but the PMI's are now beginning to share the advantages they provide.

"Our cooperation with the CNET started by way of a study contract," recalls Andrei Landau, "first, building prototypes to meet the specific needs of the PTT, then exploiting the techniques for other contracts." The technology of speech systhesis enabled them to manufacture a data processing card that is applicable to various information computerization systems, for example. "For a company like ours, oriented toward new technologies, it is a prime requisite that we obtain a know-how that will open up markets for us," he continues. The CNET thus serves as a research laboratory for the enterprises.

Small Enterprises Not Always Adequately Structured

Other PMI's also benefit from CNET licenses: The FIET [expansion unknown] company, near Rennes, has manufactured a melograph; BOGA [expansion unknown], at Fecamp, a telephone distribution frame... But they are not many in number. First, because the PMI managements more often than not do not know what the CNET can make available to them. "It has more the image of a research center distanced from industrial applications," says one industrialist who has since become better acquainted with the CNET. And secondly, because the system has its limitations, in that, although the CNET can serve as a research laboratory, its partners must, for their part, be adequately equipped from the standpoint of research and marketing to be able to work with the CNET.

Actually, the terms and conditions on which licenses are granted are not within easy reach of everyone: The CNET's efforts are not directly industrializable. They must go through a pre-industrialization phase. "The CNET stops at a laboratory prototype, even at a feasibility-study model; the enterprise then must undertake the necessary development studies. It is a long and demanding task in terms of time and capabilities. The small enterprises are not always structured to handle it," explains Andrei Landau.

The fact is that the laboratory prototype does not take into account industrial imperatives: The enterprise's industrial prototype will be a function of the material-supplies potential (composites, for example), of a marketable-price study, marketing outlet surveys, etc. "One receives documents, magnetic tapes, floppy disks... A major portion of one's research effort goes into transporting of files, translating of programs. Transcription work results in a considerable loss of time and energy," adds Arnauld Henri-Labordere. And leaving this work up to the PMI's limits their access to the know-how, in that, they must have a certain amount of experience in data processing.

Another handicap: The PMI's rarely have a marketing approach that is adequate to enable them to enter markets for new products. "Buying a license from the CNET is buying, at one's own risk and peril, a method, and industrializing it without really knowing if a market exists for it downstream," warns one industrialist. Certain PMI's have taken this risk. "We have developed telewriting equipment, and once we had mastered the technology, we have looked for its potential clients and found them," says Andrei Landau.

All products do not lend themselves to this approach: Serge Cervaux, who manages FIET, developed a melograph based on a license from the CNET: "It was an interesting idea but absolutely unprofitable," he says. "The equipment got out on the market too late and at to high a price." Today, he prefers to sign study contracts with other PTT services rather than buy a CNET license.

Between not enough dynamism on the one hand and a lack of realism on the other, the PMI's and the CNET have a long road to travel to meet each other halfway. But while it is true that these first experiences are still recent, there is still room, nevertheless, for procedural improvements. Cognizant of these difficulties, the CNET is going out of its way to resolve them. There are conceivable solutions. For example, bringing the PMI's in on the working out of laboratory models.

The CNET could also set up preindustrialization workshops, as certain public-sector laboratories have already done. Or it could subcontract for market studies on the products to be actualized, before releasing the technology to the PMI's. It is also conceivable that organizations--technology centers, for example -- could serve as intermediaries between the CNET and the PMI's to carry out the necessary industrial or marketing studies.

9399
CSO: 5500/2254

THOMSON DIVISION STEPS UP UNDERWATER DETECTION DEVELOPMENT

Paris ELECTRONIQUE ACTUALITES in French 14 May 82 pp 1,10

[Article by G. Bidal]

[Text] Sophia-Antipolis--Discreet because it is associated with the most strategic possible military activity, the Underwater Activities Division (DASM) of Thomson-CSF is nevertheless becoming increasingly large, and should exceed one-half billion francs next year. Installed only recently in a new building in Sophia-Antipolis near Nice, two steps away from the brand new department for Specialized Acoustic Techniques, which is currently being installed, and which is responsible for surface acoustic wave components, DASM has a simple goal: to be involved in all aspects of underwater detection.

In recent years, the Thomson-CSF DASM has undergone a significant volume development of more than 15 percent per year since 1978. Since that time, the personnel has grown from 900 to 1400, distributed in four centers at Cagnes-sur-Mer, Brest, Bordeaux, and in the last few months, Sophia-Antipolis, in a new 8000 square-meter center. Two months ago (see ELECTRONIQUE ACTUALITES of 19 February), a new installation was added at Valbonne to house the newly-formed department for Specialized Acoustical Techniques. This department is dedicated to the development of surface wave components, historically associated with underwater activities, even though a large portion of the department's products will fill other needs (telecommunications, radar processing), but essentially within the Detection Systems group.

The division, whose 1981 turnover was about 330 MF, expects to reach 400 MF this year and exceed one-half billion francs in 1983. About half of its activity is oriented toward exportation. Almost all of the division's products are for military use, hence the great secrecy, with only some 5-10 percent of its turnover being achieved in such sectors as oceanography or offshore oil exploitation. Within Thomson-CSF, however, its strategic importance is greater than that of its turnover alone, to the extent to which the equipment of submarines, as well as of surface ships, patrol planes, and helicopters, concerns almost all the divisions of the group, from which this division cannot be separated. While DASM has been primarily a supplier of "acoustical" products, it has tended, especially since the launching of the latest SNLE's, to become responsible for the construction of complete systems or subsystems. This, according to Mr Claveloux, director of the division, implies the "wish to be involved in all aspects of this domain."

The Eledone Family

The largest portion of the division's income, more than one-third of the turnover, comes from submarine equipment. After having supplied all the active sonar transmitters for the French navy, Thomson developed a family of integrated sonars which could be called multifunctional, the Eledone family. The same group of modular equipment will integrate all the sonar functions of a submarine: passive listening panoramic watch, with automatic tracking circuits capable of handling up to 12 simultaneous tracks; directive emission telemetry, receiving being provided by the passive listening receiver; interception of enemy sonar emissions with automatic detection; processing of data from various sensors for analytical tactical presentation; and even fire control for torpedo guidance. The passive listening antenna has 32 or 64 columns of hydrophones, from which are extracted 128 pretuned channels, and pursuit channels for 4-12 simultaneous targets, with a goniometry of one-tenth of a degree. The Eledone system underwent its sea trials last year, and about 20 units have been ordered by five European navies.

In the area of sonar systems for surface ships, starting with the Duba 25 or Diodon type of panoramic sonars (the Piranha type of directive sonars are obsolete today), Thomson-CSF developed a new line based on standard modules: acoustical bases of the Diodon type in the 10-14 kHz band or of the Tarpon type in the 7.5-10 kHz band; new antennas, of which one with 24 columns in the 20-30 kHz band, and one with 48 columns in the 5-7 kHz band; transmitters with powers in the 8 KVA to 60 KVA (Tarpon) range; receivers with 48 pretuned channels, coherent signal processing, and a compression ratio that improves by 6-fold the speed performance of the previous generation. But the progress is probably most spectacular in operator assistance and data processing: assistance in detection, classification, and sorting, coherence determination which makes it possible to eliminate false alarms, and high resolution color display, including a synthesized "tracing" of moving objects.

Another important activity of the division, based in Bordeaux, is the production of acoustical systems for ASM fighter planes. The major contract in process is the detection system of the Atlantic New Generation (SADANG), based on the processing of data from launched acoustical buoys and radio communication with the plane. In addition to the on-board processing facilities for the ANG, and soon for helicopters, Thomson-CSF manufactures two types of buoys for pasive omnidirectional listening (between 10 and 2400 Hz).

War on Mines: Magnetic Immunity

Another large field in which the division achieves nearly one-third of its turnover, is mine warfare: Thomson-CSF produces the EP 30 training mine used by the French Navy, and developed with its collaboration.

But a relatively new area is currently opening up for the division, with magnetic immunity systems, since magnetic sensors are the most widely used sensors to detonate mines. The contribution of electronics in this area is primordial, since it becomes a matter of controlling the intensity of magnetic counter-loops distributed about a ship's structure, and created by amplifiers. One example is Thomson-CSF's IMAIP 3 immunity system for the "tri-lateral" mine sweeper (built in

France in cooperation with Belgium and Holland). The system will be mass produced in Belgium. It is composed of a triaxial magnetometer developed by Thomson-CSF, and of a control chassis carrying 100 W amplifiers. The same technology is used with higher powers (up to 30 kW) for steel-hulled ships, with reductions in magnetic signature reaching a factor of 4-10.

A Study Contract for the United States Navy

An finally, still on the topic of mine sweepers, we must mention the construction by DASM of specific sonars and mine classification systems: these are the IBIS III, which was used for the same tri-lateral mine sweeper program, with simultaneous detection and localization; and IBIS V, a single-operator system which allows sequential detection and classification for smaller ships. Thomson is also studying a new generation lateral-type towed sonars, designed to detect, up to a depth of 300 m, new types of bottom or anchor buoy mines placed on the continental shelf. In addition to the tri-lateral program, which involves 40 ships, Thomson-CSF was hired by two navies for the IBIS V system, and in particular has received a development contract from the United States Navy to study, in collaboration with Raytheon, a submerged sonar for the American AMSS mine sweeper program.

11,023
5500/2243

MATRA STRIVES TO BE TOP DOMESTIC PRODUCER OF TERMINALS

Paris ZERO UN INFORMATIQUE HEBDO in French 17 May 82 p 30

[Article by Eric Sorlet]

[Text] After a period of silence, Matra has just unveiled the activities of its telecommunications branch, in France as well as abroad. Resolutely committed to a strategy of accelerated development for telematics terminals (videotex and teleinformatics) this branch has set itself the goal of becoming the sector's top French producer. Recent cooperation agreements with Tymshare on the American continent lend support to this ambition.

Matra's telecommunications branch, composed of Matra's telecommunications sector, the subsidiaries of the Sofimatel holding company--Temat/Sidep and Telephone Picart Lebas--and Peritel, has achieved a turnover of 730 MFF in 1981, for a growth of 35 percent over 1980. The turnover expected for 1982 is 930 MFF.

The year 1981 was marked by the industrial reconversion of production centers (particularly those of the Temat subsidiary, responsible for the production of terminals), by the introduction of new products (terminals, electronic automatic switch gear, and private radiotelephones), and by a strengthening of the commercial structure; today, the telecommunications branch is concentrating on teleinformatic networks/systems, and on three types of products: small capacity private switch gear (25 percent of the French market); private radiotelephones (20 percent of the French market); and especially terminals, for which the stated objective is to become the leading French producer by making 2 million telephone stations per year (50 percent of the French market), by gaining a significant position in peripheral telephony, and especially by becoming the largest supplier of videotex and teleinformatics terminals for the international and private market.

The annual turnover generated by the latter activity should be around 500 MFF in 1985, which corresponds to the sale of some 500,000 terminals.

These figures do not incorporate potential PTT markets. In this connection, Philippe Sola, head of the telecommunications branch, said that "Matra is not entertaining the possibility of not being included in DGT (General Directorate for Telecommunications) consultations" for supplying Minitel-type videotex terminals.

Distribution Agreement with Tymshare

An international division headed by Bastiaan Rohrer has been formed to develop the exportation of terminals to priority targets, particularly on the American continent and in the Middle East.

One year after signing a firm contract for the sale of 100,000 telematics terminals to Tymshare (for a figure of 180 MFF), Matra announces that it has signed with Tymshare, an exclusive distribution agreement for North America, with provisions for the delivery of 71,000 additional terminals by 1985, and beyond this, for possible orders involving nearly 389,000 additional units. In addition to this agreement, a joint distribution company is being formed, the Tymshare Matra Corporation (TMC), 70 percent of whose capital will be held by the American firm.

The terminal developed for Tymshare has been marketed in the United States since February under the name of Scanset. Two models are available: the 410 without a modem, priced at 495 dollars, and the 415 integrated terminal with a modem, priced at 649 dollars. A 720 model incorporating the telephone equipment will also be offered.

One thousand units have been delivered, and production continues at the rate of 5000 units per month at the two Temat plants in Brittany.

Contrary to what is generally asserted, these are not videotex terminals but teleinformatics terminals (ASCII standards). By the end of the year, Matra should introduce a French version of Scanset, priced at about 4000 FF.

The choice of ASCII does not mean that Matra does not believe in videotex, but that this market is not yet considered as ready. A mixed ASCII/videotex version is nevertheless planned for the end of the year. As for strictly videotex terminals, their mass production is not planned until the more distant future.

At the international level, Matra has also obtained a contract in Brazil with Telesp, to supply 2500 terminals intended for a trial project in Sao Paulo, like the one in Velizy.

In addition, the French firm has answered the call for bids from the Kuwait Ministry of Communications, for a network of 3000 terminals (with possible expansion to 10,000). The value of this contract is said to be of the order of 10 MFF.

Negotiations are also underway in Latin America, more specifically in Venezuela, Argentina, and Colombia; in South Africa, where terminals compatible with the British Prestel system have been introduced; in Australia; and in the Near East.

11,023
CSO: 5500/2243

CIT ALCATEL, INDIA SIGN FR 3 BILLION CONTRACT

Paris LES ECHOS in French 17 May 82 p 7

[Article by J. J]

[Text] A good weekend for the national telecommunications industry. CIT-Alcatel (CGE group) is getting ready to walk away with a "supercontract" of over 3 billion francs. This is because a common doctrine has blithely moved between the Francois Mitterrand and Indira Gandhi brands of socialism, giving France the advantage of transferring technology from an industrialized nation to a developing one, in the name of emancipation.

This doctrine arose from an agreement which made it possible to eliminate the largest telephone manufacturers in the world, whether English (General Electric, Plessey, STC), American (ATT and ITT), Japanese (Nippon Electric), German (Siemens), or Swedish (LM Ericsson). A government- to-government framework agreement officially consecrates the new form of cooperation between Paris and New Delhi. The other countries cannot get over it and are raging at the sight of France winning an 8 billion franc grand slam in India, since 5 billion fell into Dassault's purse a few weeks ago, with the licensed manufacture of some 40 Mirage-2000 planes.

The political and industrial activity to facilitate this success has been intense. Did not Jean-Pierre Chevenement visit India, followed some time later by Jacques Attali? What they had to say was simple: "We are ready to help you become a great economic power by providing you with equipment, plants, and even more importantly, our know-how." A seductive enough proposition for Indira Gandhi at a time when she wants to strengthen her political clout in South-East Asia in the face of awkward neighbors like the Soviet Union and China, and of the ambitions of some border countries like Pakistan.

Call for Bids for an Additional 3 Billion Contract

This is why CIT-Alcatel will not merely deliver 200,000 "all-electronic" telephone lines and 20,000 interurban circuits. There currently are 1.7 million stations operating for 650 million inhabitants. A production center with a capability of 500,000 lines will be erected thanks to French technology for a total figure of 1 billion francs. In a second phase, two other units of 250,000 lines to be installed and modernized in the city of Hosur will cap the expansion program for India's telephone network. The bill comes to 2.2 billion.

The industrial agreement is complemented by cooperation between CNET (PTT Research Center) and Indian researchers, by technical assistance and PTT training, and by easy credit: Paris agreed to an average rate of 7.5 percent, which will inevitably cause the Americans to protest once more.

But for political and strategic reasons, France was absolutely determined not to lose this telecommunications market which is one of the world's last large one. The fact is that India is only at an initial stage. A call for bids has been issued for a second contract of the order of 3 billion francs. The responses will be opened on 31 March 1983. And today's losers already fear becoming tomorrow's as well.

11,023
CSO: 5500/2243

BRIEFS

THOMSON DEVELOPS MULTIFUNCTION COMMUNICATIONS--Thomson-CSF has just disclosed that its Telecommunications Division is currently developing under a French government contract, transmitters-receivers for a multifunctional integrated system for tactical communications, which in addition to communications makes it possible to locate and identify transmitting stations. This system, called Sintac, operates in the L-band. It is similar to the American system JTIDS (Joint Tactical Information Distribution System), which is being manufactured and with which it will be compatible. It will be usable for all tactical mobile connections for the three branches of the armed forces, and in particular for surface ship-plane communications. [Text] Paris ELECTRONIQUE ACTUALITES in French 14 May 82 p 10] 11,023

CSO: 5500/2243

END

JPRS 81483

9 August 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 231

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 81483

9 August 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 231

CONTENTS

ASIA

INTER-ASIAN AFFAIRS

Japan To Supply New Zealand Fiber Optic Telephone Cable
(THE EVENING POST, 16 Jun 82) 1

Cut-Price Offer of U.S. Computer Hurts Local Product
(Richard Norman; THE EVENING POST, 15 Jun 82) 2

Group Boosts Development of Local Computer Databases
(THE PRESS, 15 Jun 82) 3

VIETNAM

Automatic Telephone Service Expansion Reported
(Hoai Nam; KHOA HOC VA DOI SONG, 1 Jun 82) 4

LATIN AMERICA

BRAZIL

Briefs

'Picosecond' Obtained in Laboratory 5

CUBA

Briefs

Testing Station Opens 6

NEAR EAST AND NORTH AFRICA

ALGERIA

Telecommunications Projects Noted
(EL MOUDJAHID, 1 Jun 82) 7

ISRAEL

Preform Production for Fiberoptics Developed
(L. Latcher; THE ISRAEL ECONOMIST, May 82) 9

OMAN

New Telecommunications Center To Be Built
(Fermin D'Souza; TIMES OF OMAN, 10 Jun 82) 10

SUB-SAHARAN AFRICA

MOZAMBIQUE

Absence of Parts, Technicians Hamstring Communications
(Arnaldo Simao; NOTICIAS, 30 Jun 82) 12

NIGER

Minister Opens Karma Ground Station, Reviews Communications Progress
(LE SAHEL, 16 Apr 82) 14

SEYCHELLES

Briefs
Change in Radio Law 17

SOUTH AFRICA

Black TV Progress Reported
(Kevin Davie; SUNDAY TIMES, 4 Jul 82) 18

Viewers Blamed for SA Video Piracy
(Sharon Li Green; THE CITIZEN, 23 Jul 82) 20

Briefs
SABC Mum on New Channel 21

TANZANIA

TPTC Charging for Defective Telephones Unrepaired for Long Time
(Balinagwe Mwambungu; DAILY NEWS, 15 Jul 82) 22

ZIMBABWE

New African News Agency Set Up
(THE HERALD, 16 Jul 82) 23

Briefs
Largest Computer Arrives 24
Soviet TV, Radio Link-Up 24

WEST EUROPE

CYPRUS

Briefs
New Telefax Service 25

FEDERAL REPUBLIC OF GERMANY

New Antenna Installation for Monitoring Foreign Broadcast
(Michael Globig; RHEINISCHER MERKUR/CHRIST UND WELT, 28 May 82) 26

Deutsche Bundespost User Services in Office Communications
(COMPUTERWOCHE, 14 May 82) 28

Briefs
Transatlantic Fiberoptic Cable 34

ITALY

Highlights of Approved National Telecommunications Plan
(POSTE E TELECOMUNICAZIONI, Mar-Apr 82)................ 35

JAPAN TO SUPPLY NEW ZEALAND FIBER OPTIC TELEPHONE CABLE

Wellington THE EVENING POST in English 16 Jun 82 p 33

[Text]

Work on installing New Zealand's first noisefree fibre optic telephone cable is expected to begin in Wellington in September.

The cable — the latest in communications technology recently arrived from Japan and will connect the Wellington central telephone exchange to Lower Hutt.

Wellington is linked to Lower Hutt by copper cables which are in ducts alongside the Hutt Road.

The Post Office's senior divisional engineer field section, Mr Lew Brennan, said problems had been experienced in the past from electricity from the nearby railway line.

This caused interference in the telephone lines served by the cable. The outer lead sheath of the cable was also being eroded and damage to the copper cable inside was caused by sea water.

The new fibre optic cable consists of fine glass fibres about the thickness of a human hair. Impulses will be sent down the fibres by laser.

The new cable cost about $800,000, a lot less than the cost of installing a new copper cable.

Because the new cable has no metal parts it is not susceptible to the effects of electricity so it is expected background noise on the telephone lines will be reduced.

Mr Brennan said the initial stage of putting in the new cable would involve about 15 men. The cable is in 16 lengths. It is expected to take a day to put each length into the duct.

Joining each length of cable is expected to take about four weeks. Then the cable needs to be made operational. Because some of the equipment needed is not expected in the country for some time yet, this may delay the process.

It is hoped to have the new cable working by next February, Mr Brennan said.

The small size of the new cable will allow more cables to be fitted into the roadside ducts in the future.

Mr Brennan said another advantage of the new cable was that it would be run on a more powerful wavelength which would not need an amplifier to boost the signal halfway down the 14.5 kilometre line.

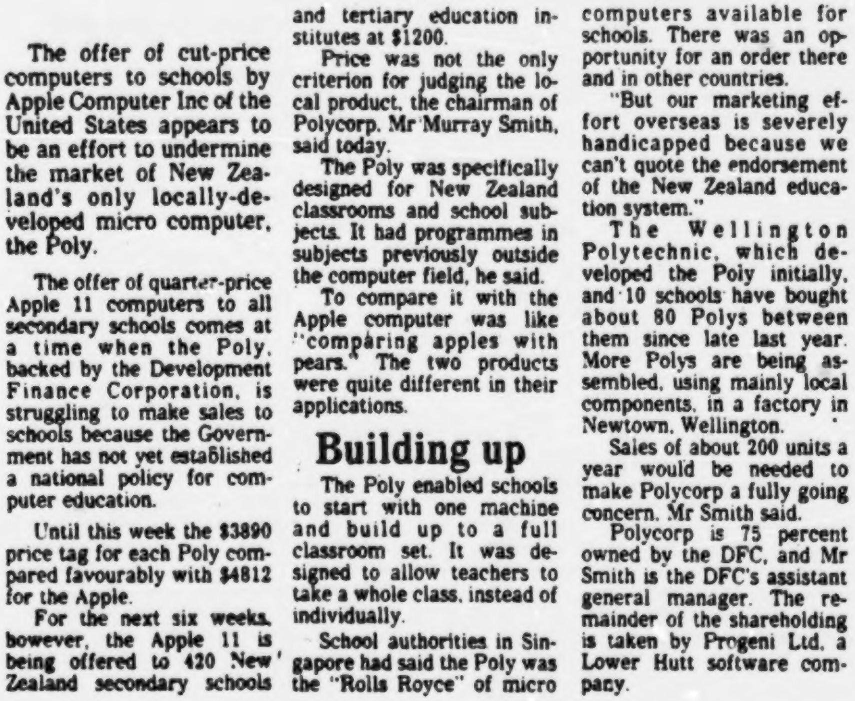
CSO: 5500/9031

CUT-PRICE OFFER OF U.S. COMPUTERS HURTS LOCAL PRODUCT

Wellington THE EVENING POST in English 15 Jun 82 p 4

[Article by Richard Norman]

[Text]



The offer of cut-price computers to schools by Apple Computer Inc of the United States appears to be an effort to undermine the market of New Zealand's only locally-developed micro computer, the Poly.

The offer of quarter-price Apple 11 computers to all secondary schools comes at a time when the Poly, backed by the Development Finance Corporation, is struggling to make sales to schools because the Government has not yet established a national policy for computer education.

Until this week the $3890 price tag for each Poly compared favourably with $4812 for the Apple.

For the next six weeks, however, the Apple 11 is being offered to 420 New Zealand secondary schools and tertiary education institutes at $1200.

Price was not the only criterion for judging the local product, the chairman of Polycorp, Mr Murray Smith, said today.

The Poly was specifically designed for New Zealand classrooms and school subjects. It had programmes in subjects previously outside the computer field, he said.

To compare it with the Apple computer was like "comparing apples with pears." The two products were quite different in their applications.

Building up

The Poly enabled schools to start with one machine and build up to a full classroom set. It was designed to allow teachers to take a whole class, instead of individually.

School authorities in Singapore had said the Poly was the "Rolls Royce" of micro computers available for schools. There was an opportunity for an order there and in other countries.

"But our marketing effort overseas is severely handicapped because we can't quote the endorsement of the New Zealand education system."

The Wellington Polytechnic, which developed the Poly initially, and 10 schools have bought about 80 Polys between them since late last year. More Polys are being assembled, using mainly local components, in a factory in Newtown, Wellington.

Sales of about 200 units a year would be needed to make Polycorp a fully going concern, Mr Smith said.

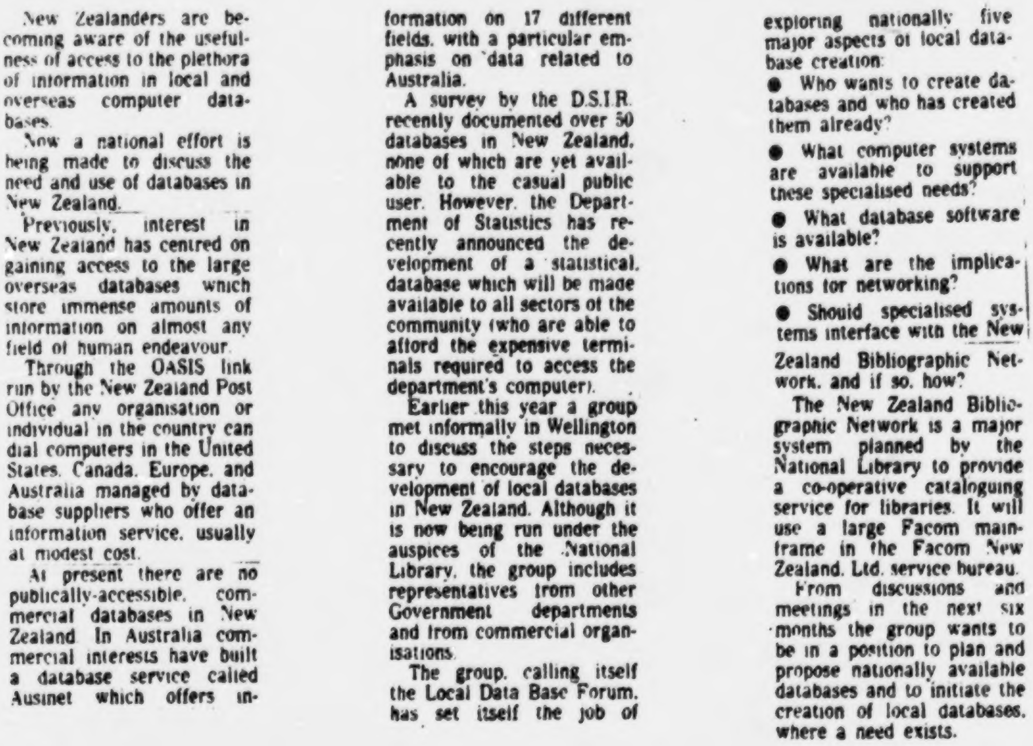
Polycorp is 75 percent owned by the DFC, and Mr Smith is the DFC's assistant general manager. The remainder of the shareholding is taken by Progeni Ltd, a Lower Hutt software company.

CSO: 5500/9032

GROUP BOOSTS DEVELOPMENT OF LOCAL COMPUTER DATABASES

Christchurth THE PRESS in English 15 Jun 82 p 25

[Excerpts]



New Zealanders are becoming aware of the usefulness of access to the plethora of information in local and overseas computer databases.

Now a national effort is being made to discuss the need and use of databases in New Zealand.

Previously, interest in New Zealand has centred on gaining access to the large overseas databases which store immense amounts of information on almost any field of human endeavour.

Through the OASIS link run by the New Zealand Post Office any organisation or individual in the country can dial computers in the United States, Canada, Europe, and Australia managed by database suppliers who offer an information service, usually at modest cost.

At present there are no publically-accessible, commercial databases in New Zealand. In Australia commercial interests have built a database service called Ausinet which offers information on 17 different fields, with a particular emphasis on data related to Australia.

A survey by the D.S.I.R. recently documented over 50 databases in New Zealand, none of which are yet available to the casual public user. However, the Department of Statistics has recently announced the development of a statistical database which will be made available to all sectors of the community (who are able to afford the expensive terminals required to access the department's computer).

Earlier this year a group met informally in Wellington to discuss the steps necessary to encourage the development of local databases in New Zealand. Although it is now being run under the auspices of the National Library, the group includes representatives from other Government departments and from commercial organisations.

The group, calling itself the Local Data Base Forum, has set itself the job of exploring nationally five major aspects of local database creation:

- Who wants to create databases and who has created them already?
- What computer systems are available to support these specialised needs?
- What database software is available?
- What are the implications for networking?
- Should specialised systems interface with the New Zealand Bibliographic Network, and if so, how?

The New Zealand Bibliographic Network is a major system planned by the National Library to provide a co-operative cataloguing service for libraries. It will use a large Facom mainframe in the Facom New Zealand, Ltd. service bureau.

From discussions and meetings in the next six months the group wants to be in a position to plan and propose nationally available databases and to initiate the creation of local databases, where a need exists.

CSO: 5500/9032

AUTOMATIC TELEPHONE SERVICE EXPANSION REPORTED

Hanoi KHOA HOC VA DOI SONG in Vietnamese 1 Jun 82 p 2

[Article by Hoai Nam, Post and Telecommunications General Department: "Polex 6 Brings Automatic Telephone From Provinces to Districts"]

[Text] Since it was not tropicalized, POLEX 6, a 6-line wave carrier made by the German Democratic Republic, often transmits spurious ringing signals when used on our communications network, and has a short operating range (about 40 km). Optimal use of POLEX 6 should require proper wires, matching electric resistance, and a number of other technological norms. It is very difficult to meet these requirements, given the present situation of our communications lines. For that reason, fairly large quantities of the POLEX 6 were in storage at a time when the communications and liaison network was short of equipment. Nguyen Dinh He, technical cadre at the Post and Telecommunications Equipment Repairs Enterprise, following research has successfully modified POLEX 6 for use as a carrier to transmit automatic telephone signals from provinces to districts, on a range exceeding 40 km. These alterations include:

--adjust its interior circuits to automatic telephone parameters,
--tropicalize its major parts, and
--add a guiding device to facilitate readjustment.

After being modified, POLEX 6 was assembled and installed for testing on the Thanh Hoa-Yen Dinh communications line. For nearly a year now, its performance has been stable and good. As a result, the Thanh Hoa Post and Telecommunications automatic telephone network has expanded by 40 km, without having to modify and upgrade the lines. This success has opened up prospects for using POLEX 6 to extend automatic telephone beyond cities or municipalities, and to automate district telephone without having to install additional automatic telephone exchanges. Encouraged by that initial success, technicians of both sexes now consider using POLEX 6 (or its equivalents) to bring automatic telephone signals from Hanoi to a number of provinces in the northern delta and the northern part of former Zone 4.

9213
CSO: 5500/5896

BRIEFS

'PICOSECOND' OBTAINED IN LABORATORY--Campinas--Researchers of the University of Campinas [UNICAMP] have managed to obtain in the laboratory for the first time in Brazil the "picosecond" [pico segundo], a phenomenon which consists in a pulse of the laser light which lasts one trillionth of a second. The "picosecond" obtained so far only in the United States and Europe, will be used beginning next year by TELEBRAS [Brazilian Telecommunications, Inc] to study fiber optics, especially fibers with a high capacity to transmit information and which has not been possible to find so far with conventional methods. This research was begun 6 months ago by UNICAMP professors Marcos Scarparo and Carlos Henrique Brito, and by TELBRAS Prof Ramakan Scivastava. TELEBRAS and FAPESP [Foundation for the Protection of the Sao Paulo State Research--Fundacao de Amparo a Pesquisa do Estado de Sao Paulo] are financing the project. According to them, the "picosecond" will be used in the construction of electrical circuits, of semi-conductor crystals, in addition to other uses in biology and chemistry. The result of this work will be officially reported to the scientific community at the 34th annual meeting of the SBPC [Brazilian Society for the Progress of Science--Sociedade Brasileira Para o Progesso da Ciencia] to be held in Campinas next month. [Excerpt] [PY222351 Sao Paulo O ESTADO DE SAO PAULO in Portuguese 30 Jun 82 p 11]

CSO: 5500/2306

CUBA

BRIEFS

TESTING STATION OPENS--A radio and television transmissions technical testing station, the third in the country, has been opened at Loma del Yarey Municipality in Granma Province. Pedor Guelmes, member of the central committee and minister of communications, attended the opening of the station which was dedicated in commemoration of the 26th July. The station will measure the parameters of radio and television transmissions and will serve the five easternmost provinces. [Text] [FL231135 Havana Domestic Service in Spanish 1000 GMT 23 Jul 82]

CSO: 5500/2308

TELECOMMUNICATIONS PROJECTS NOTED

Algiers EL MOUDJAHID in French 1 Jun 82 p 12

[Article: "A Microwave Link at Tolga"7

[Text] Biskra (APS)--Mr Becher Rouis, member of the Central Committee and minister of posts and telecommunications, made a working and inspection visit in the wilaya of Biskra yesterday.

Accompanied by his close collaborators and authorities of the wilaya, the minister inaugurated and visited several new projects coming under his ministerial department in the dairas of El Oued, Tolga and Biskra.

On his arrival, Becher Rouis visited the postal collection center of Guemmar, built by the communal enterprise of El Oued. The collection center will be operational in October. The minister visited the 600-line central telephone exchange, installed in temporary premises.

At El Oued, the minister visited the ground station for diffusion of television broadcasts. Mr Rouis then went to the construction site for the first-class collection center of the city of a thousand domes; the work on it, begun in 1981, will be completed in June 1983. The collection center, being built by the communal enterprise, required a financial package of DA 3.9 million.

The minister inaugurated the 4th-class postal collection centers in the localities of Zegoum-Hasskani Abdelkrim, Hadj Khelifa and Magran in the commune of Debila. Built in accordance with a type plan prepared by the design office of the Ministry of Posts & Telecommunications, these agencies suffer mainly from the size of the switchboards installed, which cannot handle the constantly growing subscriber demand.

On their return to El Oued, the minister and the delegation accompanying him were the guests of the daira for lunch.

In the afternoon, the minister laid the cornerstone of a 4th-class collection center at Ourlale in the daira of Tolga. A financial package of DA 1,015,000 has been provided for this center, which will be built, in a period of 18 months, by the Tolga intercommunal public-works association.

At Tolga, Mr Rouis inaugurated a microwave station. This station, which cost DA 5.1 million, makes it possible to connect all the dairas of the wilaya.

The minister, before chairing, in the wilaya chief-town, a working session that brought the wilaya's authorities together, visited the 5,000-line central telephone exchange.

The wilaya of Biskra, created in 1974 in the last administrative redistricting and extending over an area of 110,000 km^2, with a population--according to the 1977 census--of 544,798, divided administratively into 6 dairas comprising 22 communes, suffers from the distances that separate certain of its communes.

The Posts & Telecommunications administration in the wilaya rests on an infrastructure comprising 74 postal establishments: 7 at Biskra, 14 at El Meghaier, 24 at El Oued, 4 at Ouled Djellal, 13 at Sidi Okba and 12 at Tolga.

The post-office infrastructure (one per 7,362 inhabitants) will be improved by the numerous projects written into the 5-year development plan.

As regards telecommunications, the lag is considerable if the 9,062 subscribers who have service are compared with the 9,856 applications for service.

As regards automatic equipment, the present infrastructure is composed of a central telephone exchange at Biskra with 5,000 lines, 81-percent saturated, and one at El Oued with 2,740 lines. El Maghaier, Tolga, Ouled Djellal, Sidi Okba and Djemaa have a capacity of 500 lines each.

The wilaya of Biskra aslo has 1,600 manual lines in larger communes. The scope of the projects granted to the wilaya under the 5-Year Development Plan will enable it to catch up.

Thus it is planned to rebuild 11 post offices and build a new collection center at Biskra.

As regards telecommunications, it is planned to build seven new central telephone exchanges with capacity of 8,500 lines and to expand the exchanges of El Oued, whose capacity will be raised to 3,000 lines, and of Djemaa, Ouled Djellal and Sidi Okba, which will be raised to 2,000 lines each, which, between now and the end of the 5-Year Development Plan, will increase the wilaya's capacity to nearly 30,000 lines. Furthermore, fulfillment of the 5-Year Development Plan will make it possible to end the isolation of 22 distant localities of the wilaya.

We note that Mr Becher Rouis will pay a similar visit to the wilaya of Batna on Tuesday.

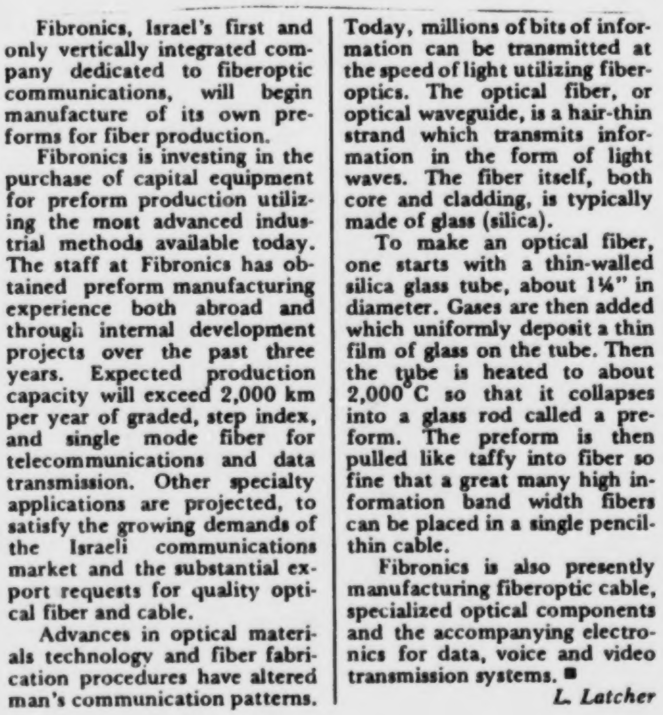
11267
CSO: 5500/5010

PREFORM PRODUCTION FOR FIBEROPTICS DEVELOPED

Jerusalem THE ISRAEL ECONOMIST in English May 82 p 17

[Article by L. Latcher]

[Text]



Fibronics, Israel's first and only vertically integrated company dedicated to fiberoptic communications, will begin manufacture of its own preforms for fiber production.

Fibronics is investing in the purchase of capital equipment for preform production utilizing the most advanced industrial methods available today. The staff at Fibronics has obtained preform manufacturing experience both abroad and through internal development projects over the past three years. Expected production capacity will exceed 2,000 km per year of graded, step index, and single mode fiber for telecommunications and data transmission. Other specialty applications are projected, to satisfy the growing demands of the Israeli communications market and the substantial export requests for quality optical fiber and cable.

Advances in optical materials technology and fiber fabrication procedures have altered man's communication patterns. Today, millions of bits of information can be transmitted at the speed of light utilizing fiberoptics. The optical fiber, or optical waveguide, is a hair-thin strand which transmits information in the form of light waves. The fiber itself, both core and cladding, is typically made of glass (silica).

To make an optical fiber, one starts with a thin-walled silica glass tube, about 1¼" in diameter. Gases are then added which uniformly deposit a thin film of glass on the tube. Then the tube is heated to about 2,000°C so that it collapses into a glass rod called a preform. The preform is then pulled like taffy into fiber so fine that a great many high information band width fibers can be placed in a single pencil-thin cable.

Fibronics is also presently manufacturing fiberoptic cable, specialized optical components and the accompanying electronics for data, voice and video transmission systems. ■

L. Latcher

CSO: 5500/4731

OMAN

NEW TELECOMMUNICATIONS CENTER TO BE BUILT

Muscat TIMES OF OMAN in English 10 Jun 82 p 1

[Article by Fermin D'Souza]

[Text] A three storey telecommunications centre is to be built near the General Telecommunications Organisation building in Greater Muttrah.

Approximately 4,000 sq. metres in area, the building will be the nerve-centre of the extensive telecommunications network spreading across the Sultanate.

Exchange buildings will also be built in Muscat, Muttrah, Wattayeh, Al Khuwair, Qurm, and Azaiba. Four microwave link systems are to be set up, the longest being the Nizwa-Salalah system to be routed via Nizwa, Adam, Haima, Thumrait and Salalah.

The three other microwave link systems are the Capital Area system, the Nizwa-Ibri link and the Al Hajar-Qurayat link.

The RO 300,000 contract for the design and supervision of the first phase of the civil works was awarded late last month to the Omani architects and civil engineers, Ayoub Oghanna Associates.

Working to a very tight time schedule of two weeks, the architects submitted the preliminary submitted the approval, giving several alternatives two days before the deadline.

"You will appreciate from the extensive a mount of work produced at the shortest time recorded in any civil consultancy service contract in Oman, that we have achieved a mini-miracle in the preparation of not only the sketch design of each building type but many alternative proposals along with technical details and a block model," Mr Oghanna told the Times of Oman.

"The spirit of the designs and the style of the buildings have been inspired by the glorious past and the national heritage of this country, he added "Our approach and priority have been to produce designs to match the local character."

The microwave repeater stations to be built on mountain tops, will take the form of watch-towers. This has been done to ensure they do not intrude on the environment and overall character of the mountains.

The Nizwa-Salalah microwave link system will have 25 to 28 transmission towers located within half a kilometre from the highway, and 26 microwave repeaters. The Nizwa-Ibri link will have three repeaters and four transmission towers within a kilometre of the highway.

The Al Hajar-Qurayat link will have three repeaters and five towers, again within a kilometre of the highway.

The Capital Area system will have seven to twelve transmission towers to be set up at Greater Muttrah, Muscat, Muttrah, Wattayeh, Azaiba summit, Qurm, Al Khuwair, Seeb, Al Khodh, Mabella, and Rusail. The microwave link involces four passive reflectors.

• Our picture shows an artist's impression of the proposed TCC building to be constructed next to the GTO building at Greater Muttrah.

CSO: 5500/4728

ABSENCE OF PARTS, TECHNICIANS HAMSTRING COMMUNICATIONS

Maputo NOTICIAS in Portuguese 30 Jun 82 p 3

[Article by Arnaldo Simao]

[Text] According to what our newspaper was able to learn in Inhambane Province, in spite of having used old parts since 1978 the communications system in that province lacks manual switching equipment and technicians.

Jose Manuel Canelas Perreira, automatic switching expert in that province, who granted us an interview, stressed that because of lack of this equipment the network of the Maxixe district is in danger of coming to a standstill.

"Two BC type switchboards, covering 147 subscribers each, were recovered. One was among the old equipment that was there and the other in Maputo. This happened in December last year. In the meantime these switchboards have not yet been installed for some reason and are being held in Maputo," he said.

According to our source, the lack of this equipment, all of it imported, is probably due to bureaucratic problems, since the orders abroad must be placed 3 years in advance.

Avelino Afua, the technician in charge of the manual exchanges in the southern region in Maputo, said that it is true there is a nationwide lack of accessories, which makes telecommunications difficult.

"We have a series of manual switchboards in the country that are disintegrating. It is quite difficult to use them because of lack of accessories. In Mozambique there are various makes of commutators, which means that for installation or replacement, long and careful studies are necessary. In the specific case of Inayambane, or better, of Maxixe, the equipment there came from Tete in 1970. It has been in use for over 25 years. Its replacement is awaiting the opinion of the Board of Experts about the composition of the telephone lines to be installed."

At this stage, Maxixe will benefit from the automatic exchange to Inahambane and Maputo.

These statements were confirmed at the Board of Exports by Engr Gilberto Fernandez, technical director of the southern region zone. In the meantime, at the Telephone Material Center the relays were adapted for direct dialing because the switchboards were semiautomatic.

Lack of Technicians

Among other problems affecting telecommunicationsin Inahambane is the lack of technicians for the manual exchange network lines which cover approximately 400 km (from Zavala to Mambone) with 25 exchanges. There is also another recently concluded line for the Homoine district via Inhamussua.

There is only one technician (the one we interviewed) to cover this network, one assistant and one officer helper.

Burning

Burning of the fields by the population near National Highway No 1 and on the district roads is another problem mentioned by Jose Canelas, who said that these are responsible for cuts of lines given the fact that the fire reaches the posts, most of which are wooden.

11634
CSO: 5500/5861

MINISTER OPENS KARMA GROUND STATION, REVIEWS COMMUNICATIONS PROGRESS

Niamey LE SAHEL in French 16 Apr 82 p 2

[Excerpts] Among the activities marking the eighth anniversary of the FAN [Niger Armed Forces] takeover, Minister of Posts and Telecommunications Mr Abdou Mallam Moussa inaugurated the Karma ground station at 10 o'clock yesterday morning.

In his speech, Mr Abdou Mallam Moussa first stated that "The developing society, the society that the vast majority of Nigeriens wants, can only be conceived and fully realized if our country possesses a more and more reliable [communications] network, of greater and greater extent, capable of permitting unison, consultation and dialogue."

"It is for this reason," continued the minister, "that in Niger, notwithstanding the proven economic profitability of the project, we give it a value which no calculation can assess, because it affects the overall development of the entire nation. Nigeriens have understood and we would like to persuade all of our friends that every investment in the domain which brings us together today serves above all else to unite Nigeriens and to link them to other peoples. Serving social peace, such an investment is beyond price."

"The first phase of the combined telecommunications extension and television project that we are opening today follows the microwave link project completed since FAN came to power and the 1978 inauguration of the Goudel ground station, gift of our sister republic Algeria, which has already permitted our country to begin breaking out of its isolation."

The minister of posts and telecommunications then revealed that this phase essentially concerned the telecommunications and television coverage of the northern and eastern regions of the country. The Karma station constitutes the key part and includes:

1. The A-standard station for international programming, with its 32.5-meter diameter antenna weighing 350 tons. It will insure emission and reception of television pictures and sound.

2. The B-standard station--called domestic--the national network control. Its antenna is 11.8 meters in diameter.

3. The technical equipment for these two stations, as well as the spare parts required for maintenance.

4. Power supply equipment, with notably two electrical generators, each of 400 kilovolt-amperes, insuring aid to the public power in times of shortage.

5. A pumping and treatment station to furnish potable water.

6. The outgoing microwave link, insuring the connection between Karma and the National Microwave Center at PK5 on Ouallam Road.

7. An administration building.

8. Ten housing units for the staff.

9. Four housing units for supervisors.

During the same phase, there was set up at Diffa:

--A B-standard ground station
--A 400-line automatic telephone exchange.
--A citywide network.
--A public electric power plant.

In Agadez, another B-standard ground station was set up, as well as additions and modifications to the telephone exchange.

In Arlit:

--The Agadez-Arlit microwave link, with its five relay stations.
--The automatic exchange.
--The citywide network of subscribers
--The In'Gall television receiver station.
--Radio stations in Air, El Mecki, Tinia, Tarrouadji.

Continuing his speech, the minister stated that "Nigeriens deeply appreciate the fact that henceforth cities like Agadez, Arlit and Diffa will be linked to the national network by telephone, telex and telegraph connections of unquestionable reliability."

"From now on, they will consider themselves above all else to be Nigeriens, and their ties to national life grow stronger each day since Diffa, Agadez, Arlit, In'Gall and their surrounding area can follow the news and entertainment broadcast on television. That has an inestimable value. It's a question of the profitability of this sector which no economic calculation can evaluate to its fullest and which Nigeriens value above all else."

Nevertheless, the minister noted several obstacles that remain to be overcome.

"There are still blacked-out areas to be covered. I'm talking about Filingue, N'Guigmi, Tchintabaraden and Bilma."

"The quality between Tahoua and Konni must be improved. We can hope that the effort will continue and that the 'broadcast gaps' will soon be filled. We must also find ways to make these transmission networks profitable by adding the needed network of urban trunklines."

Dealing with the problem of personnel training, Abdou Mallam Moussa declared that everything would be done to improve and perfect the training of the men responsible for the care and maintenance of the equipment.

"In the training area, the actions taken at the beginning of the project are already bearing fruit. In fact, if the Nigerien network is one of the most reliable in Africa, it's because the young Nigeriens educated in Europe, at suppliers' plants and on-the-job sites, made it a point of honor to show their ability to assimilate these ultra-modern techniques.

"There are nearly 125 technicians of all levels who have received the necessary training: 6 chief inspectors and inspectors, 60 controllers and 58 assistant controllers and technicians, in fields as varied as ground stations, microwave relays, switching, urban networks and power. Each of them has at his disposal at his center or station all the necessary documentation and above all the maintenance sheets allowing them to quickly intercede to repair and maintain the equipment."

The minister continued, indicating that, "This maintenance training program, which began in September 1980, will have cost, at its completion in 1983, nearly 1.5 billion francs to the Nigerien state."

Discussing the total cost of the first phase of the combined project of television and telecommunications extension, the minister indicated that it would reach 16,790,000,000 CFA francs, with financing made possible thanks to a 2.1 billion franc subsidy from the Aid and Cooperation Fund, a loan of 4.75 billion francs from the Central Fund for Economic Cooperation, private credits of 7.36 billion francs and a Nigerien matching grant of 2.58 billion francs.

9939
CSO: 5500/5771

BRIEFS

CHANGE IN RADIO LAW--Life on the outer islands of Seychelles is now safer with less danger of them being cut off, thanks to a change in the law on compulsory radio sets. Under a 1978 decree most inhabited islands had to have a radio for two-day communication with Mahe, but now a stand-by receiver/transmitter has to be provided as well in case the main set breaks down. The Radio Communications (Islands) (Amendment) Act, which came into force last month, says that stand-by radios must be set up on 18 islands and island groups, including all the Government-owned ones. Radios on the outer islands are seen by the Government as vital to development and to the safety of the residents, particularly in cases of medical emergency. Most of the main islands now have air strips and planes can be called quickly to take people off for treatment. On islands without airstrips the radio is the only means of frequent contact with Mahe and if the set broke down, the residents could be completely cut off for up to three months until the next scheduled call by the Cinq Juin. But with a stand-by set help could be called and sent using the airstrip on the nearest island or medical supplies could be dropped by plane. Radios are also a key part of the country's security network, including the monitoring of the exclusive economic zone. Under the amended law any island owner who does not install two radio sets or who fails to maintain or operate them could be fined up to R. 10,000 and jailed for up to a year. The islands covered by the law are the Aldabra, Cosmoledo, Farquhar, Poivre and Providence groups; Alphonse, d'Arros, Assumption, Astove, Coetivy, Desroches, Fregate, Ile Denis, Ile Plate, Ile aux Vaches (Bird), Marie-Louise, Silhouette and Ile du Nord. [Text] [Victoria NATION in English 5 Jul 82 p 10]

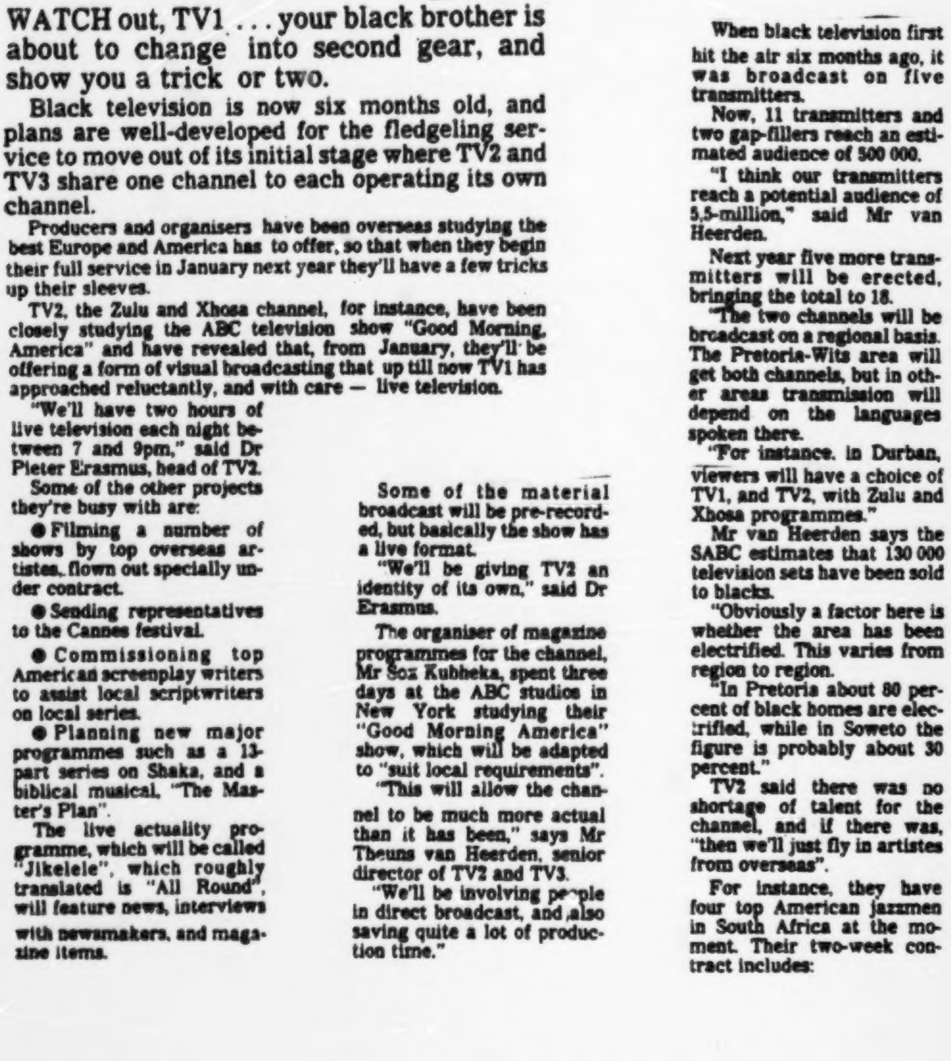
CSO: 5500/5866

BLACK TV PROGRESS REPORTED

Johannesburg SUNDAY TIMES in English 4 Jul 82 p 6

[Article by Kevin Davie: "Now Black TV Is Learning Fast"]

[Text]



WATCH out, TV1 . . . your black brother is about to change into second gear, and show you a trick or two.

Black television is now six months old, and plans are well-developed for the fledgeling service to move out of its initial stage where TV2 and TV3 share one channel to each operating its own channel.

Producers and organisers have been overseas studying the best Europe and America has to offer, so that when they begin their full service in January next year they'll have a few tricks up their sleeves.

TV2, the Zulu and Xhosa channel, for instance, have been closely studying the ABC television show "Good Morning, America" and have revealed that, from January, they'll be offering a form of visual broadcasting that up till now TV1 has approached reluctantly, and with care — live television.

"We'll have two hours of live television each night between 7 and 9pm," said Dr Pieter Erasmus, head of TV2.

Some of the other projects they're busy with are:

- Filming a number of shows by top overseas artistes, flown out specially under contract.
- Sending representatives to the Cannes festival.
- Commissioning top American screenplay writers to assist local scriptwriters on local series.
- Planning new major programmes such as a 13-part series on Shaka, and a biblical musical, "The Master's Plan".

The live actuality programme, which will be called "Jikelele", which roughly translated is "All Round", will feature news, interviews with newsmakers, and magazine items.

Some of the material broadcast will be pre-recorded, but basically the show has a live format.

"We'll be giving TV2 an identity of its own," said Dr Erasmus.

The organiser of magazine programmes for the channel, Mr Soz Kubheka, spent three days at the ABC studios in New York studying their "Good Morning America" show, which will be adapted to "suit local requirements".

"This will allow the channel to be much more actual than it has been," says Mr Theuns van Heerden, senior director of TV2 and TV3.

"We'll be involving people in direct broadcast, and also saving quite a lot of production time."

When black television first hit the air six months ago, it was broadcast on five transmitters.

Now, 11 transmitters and two gap-fillers reach an estimated audience of 500 000.

"I think our transmitters reach a potential audience of 5,5-million," said Mr van Heerden.

Next year five more transmitters will be erected, bringing the total to 18.

"The two channels will be broadcast on a regional basis. The Pretoria-Wits area will get both channels, but in other areas transmission will depend on the languages spoken there.

"For instance, in Durban, viewers will have a choice of TV1, and TV2, with Zulu and Xhosa programmes."

Mr van Heerden says the SABC estimates that 130 000 television sets have been sold to blacks.

"Obviously a factor here is whether the area has been electrified. This varies from region to region.

"In Pretoria about 80 percent of black homes are electrified, while in Soweto the figure is probably about 30 percent."

TV2 said there was no shortage of talent for the channel, and if there was, "then we'll just fly in artistes from overseas".

For instance, they have four top American jazzmen in South Africa at the moment. Their two-week contract includes:

- A 90-minute special show recorded at the Royal Hotel in Durban
- Laying down the backing track for a new biblical musical series, "The Master's Plan".

Cowboy

Next week Joshua Sinclair, a top American screenplay writer, arrives to advise local scriptwriters on the scripting of a major production on Shaka, the King of the Zulus.

Mr Sinclair has written screenplays for many Hollywood epics, including "American Gigolo".

They've also bought popular American series like "Good Times" and "The Jeffersons", and are busy with a new project — dubbing a cowboy series.

"This is not so strange," says Dr Erasmus.

"I've seen cowboys speaking French and Japanese. Why not Zulu and Xhosa?"

TV2's Organiser of Translation and Dubbing, Mr Fez Wotshela, has spent three months studying television on the continent, including watching "Dallas" in Italian and Hebrew.

He says if overseas programmes were not translated from English, then "only the educated people would understand them.

"We can't only cater for the educated," he said.

Critics Cool, But Most Like TV 2/3

HOW many blacks watch television? The SABC admits that it's working in the dark when it comes to actual audience figures.

An independent survey of audience numbers and preferences is being completed, which, it says, "should be available within a few weeks".

The SABC has had to rely on letters and phone calls received, plus informal street interviews to assess the impact it has been making.

"I would say that 90 percent of the letters we've received have been favourable," says TV2's Dr Erasmus.

Criticism received includes:

- Not enough music.
- Broadcast hours too short.
- Not enough sport.
- Too much sport.

The Sunday Times spoke to some black viewers and critics to get their viewpoint. The critics were generally negative, saying that there was a lot of room for improvement, but the "man-in-the-street" seems impressed.

* * *

"It's a good thing. I really like it, and watch all the programmes," was the general reaction of black viewers.

Critics and viewers add these criticisms to those above:

- News full of propaganda.
- Not enough drama.
- Programmes too short.
- Broadcast hours not long enough.
- Too many repeat shows.

Quite a number said that they switched to TV1 for drama, and when the broadcast hours of black television finished at 9.30pm.

Senior men at the SABC all agree that the biggest problem they've faced so far, and which has probably led to the most criticism, is the shortage of broadcast time.

TV3 for instance, which caters for the North Sotho, South Sotho, and Tswana languages, has only managed four hours per language group per week. In January, however, when the two channels split, they'll both double the time on the air.

"We'll be able to provide more of every type of programme," says Mr Hein Kern, head of TV3.

"There'll be more music, three times the amount of drama, a programme on religion ... we'll have more time for all sorts of programmes."

* * *

The SABC also says that as more equipment becomes available, and staff improve through experience, the quality of the service will continually improve.

"We're still in the experimental stage," explains Dr Erasmus, head of TV2, "learning as we go along".

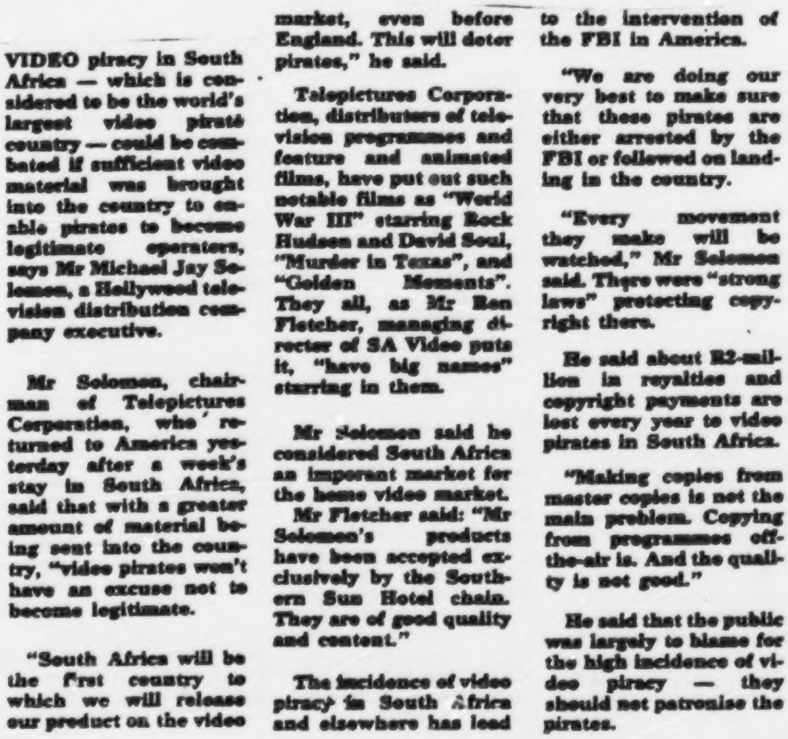
CSO: 5500/5869

VIEWERS BLAMED FOR SA VIDEO PIRACY

Johannesburg THE CITIZEN in English 23 Jul 82 p 4

[Article by Sharon Li Green]

[Text]



VIDEO piracy in South Africa — which is considered to be the world's largest video pirate country — could be combated if sufficient video material was brought into the country to enable pirates to become legitimate operators, says Mr Michael Jay Solomon, a Hollywood television distribution company executive.

Mr Solomon, chairman of Telepictures Corporation, who returned to America yesterday after a week's stay in South Africa, said that with a greater amount of material being sent into the country, "video pirates won't have an excuse not to become legitimate.

"South Africa will be the first country to which we will release our product on the video market, even before England. This will deter pirates," he said.

Telepictures Corporation, distributers of television programmes and feature and animated films, have put out such notable films as "World War III" starring Rock Hudson and David Soul, "Murder in Texas", and "Golden Moments". They all, as Mr Ben Fletcher, managing director of SA Video puts it, "have big names" starring in them.

Mr Solomon said he considered South Africa an imporant market for the home video market.

Mr Fletcher said: "Mr Solomon's products have been accepted exclusively by the Southern Sun Hotel chain. They are of good quality and content."

The incidence of video piracy in South Africa and elsewhere has lead to the intervention of the FBI in America.

"We are doing our very best to make sure that these pirates are either arrested by the FBI or followed on landing in the country.

"Every movement they make will be watched," Mr Solomon said. There were "strong laws" protecting copyright there.

He said about R2-million in royalties and copyright payments are lost every year to video pirates in South Africa.

"Making copies from master copies is not the main problem. Copying from programmes off-the-air is. And the quality is not good."

He said that the public was largely to blame for the high incidence of video piracy — they should not patronise the pirates.

CSO: 5500/5869

BRIEFS

SABC MUM ON NEW CHANNEL--The SABC is remaining tight-lipped about speculation that another television channel for Whites is on the cards. An official statement issued yesterday stated the SABC had "noted" newspaper reports on the subject but could "naturally not react at this stage." "A firm plan or clear proposal will first have to be laid on the table before the SABC board can give any attention to such a matter," the statement said. However, it has been reported that Mr Regardt Steinmann, SABC's administration organiser who is in charge of broadcasting times, has confirmed that new developments are in the pipeline. It is believed that plans for the new channel have been initiated by certain organisations in the private sector who have an interest in the financial possibilities of television advertisements. Speculation some time ago was that the four major newspaper groups, Perskor, Argus, SAAN and Nasionale Pers would run the new channel in cooperation with the SABC. The latest speculation is that the proposed channel will more or less follow the pattern of the independent British TV station ITV. It would, however, have to hire facilities from the SABC whose board of control would probably have the final say on the control of the station. The question of an independent TV channel was indirectly raised in the report of the Steyn Commission of Inquiry into the Media. [Text] [Johannesburg THE CITIZEN in English 23 Jul 82 p 2]

CSO: 5500/5869

TPTC CHARGING FOR DEFECTIVE TELEPHONES UNREPAIRED FOR LONG TIME

Dar es Salaam DAILY NEWS in English 15 Jul 82 p 1

[Article by Balinagwe Mwambungu]

[Text]

THE Tanzania Posts and Telecommunications Corporation (TPTC) is cashing in on defective telephones which it has failed to repair for a long time now.

A survey conducted in Dar es Salaam has revealed that many telephones have been out of order for a period of more than six months but the Corporation keeps on billing the clients at a minimum of 40/- a month.

One client who claimed his phone had been out of order for over nine months now, said whenever he approached TPTC officials, they informed him that there were over 3,000 telephones out of order in Dar es Salaam alone.

If that were true, the client argued, then the Corporation was making some 120,000/- from its clients every month for services not rendered. He said if the Corporation was not in a position to service the telephones, then it should drop the 40/- it charges for the telephone facilities.

The survey showed that among the 20 telephones tried, less than half of them were working. Some of the phones that were out of order included 63439 (Leyland Albion), 64333 (National Engineering Company), 64779 (Chandaria Industries), 64689 (Afrimetal) 64117 and 64950 (Tanzania Baby Food Manufacturers) all situated in the Page Road industrial area.

"I did not want the phone installed in my house as a mere showpiece", the client said bitterly.

Others were 50612 (National Housing Corporation), 50310 and 50613 in Temeke area.

In Kinondoni District, telephones which were defective included 44132, 48168, 44304 and 44997 — all in residential areas.

Asked for comments, the TPTC Director General Ndugu J. Maeda, said it was true that a number of telephones were out of order in Dar es Salaam and that the Corporation would soon issue a statement to explain the steps it was taking.

Ndugu Maeda promised to call a Press conference "sometime next week" to discuss the issue and other related matters affecting the Corporation.

CSO: 5500/5868

NEW AFRICAN NEWS AGENCY SET UP

Harare THE HERALD in English 16 Jul 82 p 3

[Text]

NEWSLINK AFRICA, a pan-African features and photonews agency, has started its operations in London. It incorporates Harambee African News Service, which ceased business after six years on June 30.

Newslink Africa aims to provide full coverage of events in Africa for publication and broadcast worldwide each week, Mr Shamlal Puri, a Tanzanian journalist who is also managing director of the agency said. "We have transferred all business from the old firm to Newslink Africa."

He said Newslink Africa was planning to open bureaux in several capitals including Lagos and Harare, and will have correspondents in major African countries.

Established African journalists with solid experience in analysing events in their respective countries would also contribute to the news service, he said.

"We want to play our role in the new information order by projecting the true image of Africa. For far too long, Western journalists have given prominence to coups, hunger, corruption and war in Africa.

"We aim to report on the positive aspects of economic and social development in Africa. We will not be afraid to tackle controversial subjects. Our independence leaves us free to say what we think and feel," said Mr Puri.

Newslink Africa was not a propaganda part of some great multinational enterprise. It was owned and edited by a group of dedicated African journalists whose main aim is the dissemination of news features objectively.

Newslink Africa had a vast library of coloured and black and white pictures of events in Africa.

CSO: 5500/5867

BRIEFS

LARGEST COMPUTER ARRIVES--Zimbabwe's largest computer, worth $1,5 million, arrived in Harare this week from America. The computer, one of the latest 1982 models, was ordered by the Ministry of Finance, Economic Planning and Development. It will be used for scientific data analysis by 17 government departments. A spokesman for the ministry said the computer would be first used to analyse data for the 1982 census. Initially the computer would be manned by 12 people and the various users would have to do their own programming. "In the past, scientific users of computers were left out in the cold. The computer will help scientific analysis," he said. In future the computer would be used to train University of Zimbabwe students in computer science. Its use will also be extended with more staff, to include other Government departments. The Herald yesterday incorrectly said the computer was Dutch. [Text] [Harare THE HERALD in English 9 Jul 82 p 9]

SOVIET TV, RADIO LINK-UP--The Soviet Union will soon be no further away than the switch on your television or radio set, following the signing of a new agreement in Harare yesterday. The vice-chairman of the USSR State Committee for Television and Radio, Mr Vladimir Popov, said in Harare the agreement would involve exchanges on cultural, economic and social affairs. Saying this was the first agreement signed between Zimbabwe and the USSR, since the establishment of diplomatic relations, Mr Popov added that the two countries had agreed to have special radio and television programmes on their national days. He said the agreement would also allow the exchange of films and documentaries on the various aspects of life in the two countries. Mr Popov who leaves next Monday said his delegation would use the remaining days to get to know Zimbabwe better. He said he hoped that the long distance between Zimbabwe and the USSR would be bridged by the agreement he had signed with his Zimbabwean counterparts. He said he wished Zimbabwe success in the new life being built under the leadership of the Prime Minister, Mr Mugabe. [Text] [Harare THE HERALD in English 3 Jul 82 p 7]

CSO: 5500/5865

BRIEFS

NEW TELEFAX SERVICE--The Cyprus Telecommunications Authority has recently introduced the Telefax service as part of its continuous effort to expand and modernise its services. A CYTA spokesman explained that this service enables the transmission of documents (graphs, handwritten or printed material) between facsimile machines over the telephone network both in Cyprus and overseas. These documents can be reproduced at the receiving-end in the form of "photocopy." The facsimile subscriber wishing to transmit documents must telephone to the distant-end subscriber. The Cyprus Telecommunications Authority at present can provide facsimile machines, Group II, which can be used for the transmission of documents on paper size A4 in a time of about 3 minutes. These machines can transmit approximately 30 sheets automatically and continuously. A CYTA spokesman said that a number of law offices, business establishments and big organisations have already installed such facsimile machines and demand is expected to grow further. [Text] [Nicosia CYPRUS WEEKLY in English 16-22 Jul 82 p 8]

CSO: 5500/5347

NEW ANTENNA INSTALLATION FOR MONITORING FOREIGN BROADCASTS

Bonn RHEINISCHER MERKUR/CHRIST UND WELT in German 28 May 82 p 15

[Article by Michael Globig: "The New Ear of the Government. An Antenna Installation South of Bonn Monitors Broadcasting Stations All Over the World"]

[Text] Shortly before noon a happy melody and bird chirping filled the space: the call signal of Radio RSA, the broadcasting station of the Republic of South Africa. Then the voice of the announcer who was giving the news in English could be clearly heard. At this noontime hour it was also possible to tune in an Argentine station at the Federal Press Office's new receiving station which just a few days ago was presented to the public for the first time. Some 18 km south of Bonn near Ersdorf, in the past 3 years the most modern receiving installation of this kind in Europe has been under construction at a cost of DM27 million. Via a system of 138 antennas broadcasts and news agency reports from all over the world can be recorded here; in addition, it is possible to receive all ultra-shortwave and television stations which are within "sight."

The Ersdorf installation is the successor to a receiving station built in 1952 on Bonn's Kreuzberg which, because of the construction boom in the surrounding area, was exposed to increasingly greater interference and whose capacity, moreover, was no longer adequate to monitor the many newly established stations--principally in the Third World. But it is precisely this monitoring that is among the most important tasks of the Federal Government's Press and Information Office: as is stated in the procedures for Federal ministries, it is supposed to "provide information to the Federal Government about statements by domestic and foreign news sources (news agencies, press, radio and television) and by other agencies which shape public opinion (film, publications)."

In order to fulfill this task at the Federal Press Office 122 German and foreign newspapers and journals are read on a continuing basis, 66 radio and 7 television programs are watched and the radio services of 26 agencies evaluated.

At the site of the Ersdorf receiving station, which is 19 hectares in size, the AEG Telefunken Co buried in the ground an antenna cross consisting of two 100-m long lines for longwave reception--primarily news agencies broadcast on longwave. For middle-wave reception 8 32-m high antenna masts were arranged in a circle, 2 systems with a total of 122 antennas receive shortwave, and the ultra-shortwave and television antennas are installed on a 70-m high lattice steel tower. With this equipment the entire reception range between 10 kHz and 900 megaHz can be covered.

Whatever signals are received by these antennas run via underground cables to the antenna distributer and from there can be switched to 1 of the 52 receivers in the operations building. In these receivers the high-frequency oscillations of the broadcasts picked up are converted to low-frequency signals and sent on via normal postal communication to the Federal Press Office in Bonn for evaluation. Quality can be monitored from Ersdorf with a control device and be reregulated, if need be.

A central computer communicates to the distributer information as to which receiver is to be switched to which line at what time of the day. Without the personnel costs which were previously required to do this, a large number of foreign stations can thus be monitoried around the clock. For example, the computer automatically switches German-language programs from Radio Moscow through to Bonn.

One of the difficulties is eliminating undesirable interference. For example, both Radio Beromuenster in Switzerland and a GDR station transmit at the same frequency. Normally both are far enough apart so as not to affect one another. In Ersdorf, however--in the "ear of the Federal Government," as the receiving installation is called--they overlap, producing a gibberish that can scarcely be understood. Yet in order to be able to receive both stations separately, the short-wave antennas can either be connected together so that their directional pattern (the range of their greatest sensitivity) is aimed strictly at one station. Or else they are combined in such a way that the range with the lowest reception capability points to that station which they would like to suppress. This capability of rotating the antenna reception ranges makes the new installation particularly efficient.

12124
CSO: 5500/2271

DEUTSCHE BUNDESPOST USER SERVICES IN OFFICE COMMUNICATIONS

Munich COMPUTERWOCHE in German 14 May 82 pp XXIV-XXV

[Article: "Office Communications 'Per Post'"]

> [Text] Post Director Klaus Schenke summarized the office-communication services offered by the Bundespost (DBP) for the symposium "Initial Experiences with Teletex" sponsored by the Central Office for Telecommunications in Darmstadt. The article presents the most important statements from the Bonn Ministry.

If the services of the DBP for electronic transmission of text is to be written about here, then the discussion should be limited to just those services which permit person-to-person communication in standardized form. These services are designated in the CCITT (Comite Consultatif International Telegraphique et Telephonique: Advisory Committee of the International Telecommunications Union) as "regulated services" according to international deliberations. These are called user services if at least one of the two communication partners must use, for lack of his own end equipment, public facilities of the Post Office and or the Telecommunications Administration to enter a communication into the public telecommunication network or to receive a message from this network. One speaks of subscriber services when all of the communication partners have compatible telecommunications end equipment in their businesses which connect with the corresponding public telecommunications service.

Examples of user services are the telegram and the teleletter; examples of subscriber services are telefax, teletex and CRT-text services.

The demand for public user services is usually for electronic text transmission when the sender desires to forward his text to the receiver faster than is possible with conventional mail. This means however that the physical transportation of the communication from the sender to the receiver on a piece of paper must be dispensed with: The text is forwarded in the form of electronic signals over the appropriate telecommunications network.

The telegram service which is tailored for the transmission of short, urgent written communications is the oldest user telecommunications service.

For economic reasons--to bring cost coverage above the 50 percent level--a central EDP system for the new "Telegram Service System" (TDS) is planned for operation after 1983. The system consists of the central computer, the end equipment such as data display equipment or teletypes and the required transmission network. Under cognizance of the DBP, post offices without teletypes and ultimately the telephone subscribers receive a copy of the telephone telegram via the public telephone network.

Teleletter for Urgent Texts

The teleletter service was introduced by the DBP on an experimental basis in mid 1980. It is intended to fill a gap for rapid text communication requirements which lies between the telegram and the express letter service (no limit on text, delivery within a few hours).

The teleletter involves ordinary letter-type material in which written information is transmitted over part of the route via telecommunications methods to save time. It is transmitted between post offices via telecopiers and is finally delivered in a sealed envelope as an express letter by a postal carrier. The text can be hand or machine written information, a graph or a drawing.

Telefax subscribers can transmit and receive teleletters directly over their own telecopiers. Nonsubscribers to the telefax service can be informed by the sender via telephone concerning the input of a teleletter so that the addresse has the opportunity to pick up the transmission himself directly at the receiving station.

During the test phase of the teleletter service, about 600 post offices under cognizance of the DBP have been equipped with special telephone circuits and facsimile equipment--such as is also used in the telefax service--just for this service.

Teletex Service Since 1933

Among the public subscription services for electronic text communication, the teletex service today holds the most important position. Introduced in 1933, it has since acquired over 1.3 million subscribers worldwide. With over 140,000 subscribers, the DBP maintains the largest network in the world.

After replacing the previously complicated and largely mechanical components by highly integrated semiconductor components, the teletype of today has become a quiet and rather trouble-free piece of office equipment which can be used right at the work station.

In the FRG the telex net is a component of the integrated text and data network.

Telefax Subscribers Number 5,000

The introduction of the telefax service under the auspices of the DBP goes back to a 1976 recommendation of the Commission for the Expansion of the

Technical Communications Systems (KtK). At that time, a sufficient demand for telecopiers between companies and government agencies had been identified. After intensive preparatory work, it was possible 3 1/2 years later for the DBP to introduce on January 1, 1979 the telefax service as the second subscriber service for standardized text communication. At the beginning of 1981 it had about 5,000 subscribers.

The subscriber's telefax connection consists of a telecopier certified for telefax service, an 8-pin connector for the telecopier and a telephone connector. The telefax equipment certified by the DBP for this service is based primarily on the 1976 CCITT telecopier recommendation for group-2 equipment.

At the end of 1980, the CCITT recommendation for group-3 equipment was also available. This is digital equipment: It samples a line with 1728 picture points; possesses a one-dimensional run time code for reducing reduncancy (compresses information to be transmitted when adjacent picture points contain the same information) and makes possible a decrease in transmission time for a standard page, compared to group-2 equipment, of about 1 minute for a line resolution of 3.8 lines/mm and about 2 minutes for double line resolution, 7.7 lines/mm. Due to digital sampling, only black and white picture elements--no gray values--are transmittable.

The transmission medium for telefax is the public telephone network. Thus, telecopiers can be connected directly to the primary telephone circuit or to PBX equipment when such is installed. It is possible today for users in different countries to clear facsimile traffic when circuits and equipment conform to the same standards. However, regulated international telefax service does not yet exist.

From Memory to Memory: Teletex

International teletex traffic can start only after other countries have also undertaken the service; this is expected after 1982.

The subscriber's teletex end equipment can be communications-capable storage typewriters of text editing or processing types as long as they are certified for teletex service. Also, data processing installations with text functions can under certain conditions be attached to the main teletex circuit, provided that they satisfy the regulations for teletex service.

A teletex station equipped with the full keyboard of an office typewriter has two main sections: the local section and the communication section. In their local function, the machines are more or less conventional equipment for text composition and in this role are not subject to telecommunication administration specifications. Only when connected to the teletex network are the communications-related regulations of the teletex service relevant. The starting point for standardization is that the text must be completely stored in the local memory of such a machine before it can be sent. Instead of now being printed out, the teletex service provides for electronic transfer of the sender-memory contents to the receiver memory of another machine participating in the service.

The requirement that the local mode of operation be entirely independent from the communication mode led to the standardization of a fully automatic communication process from memory to memory via the telecommunications transport system. Since such a communication process precludes human intervention in case of transmission errors, self-checking procedures such as those already used in data transmission were prescribed.

The high quality of the teletex service is due in part also to the internationally-agreed high transmission rate of 2400 bits/s. This permits the transmission of an A4-format page in an average time of less than 10 seconds.

The teletex service offers the subscriber the potential to electronically transmit in a matter of seconds a page of machine described text in standard or cross orientation--formats A4 and A4 L, respectively--using all characters of the respective national key boards in exact format and layout. It also offers from the beginning--via translation equipment in the transmission system--access to and from national and international teletex services to the extent that these are not manually operated. Thus, from the beginning of teletex service about a million teletex subscribers can correspond with one another.

For teletex service, no uniform type of telecommunications network has been prescribed for international use. It can be one or a combination of the telephone or the data network with forwarding by wire or parcel, depending on national availability of the networks. Since the DBP has available all three types of network, it could select the one most suitable for the task. In agreement with industry the data network with wire transmission--Dx-L 2400--was selected. Due to the special nature of the teletex service whose utilization opportunities are more pervasive than those of the other Datex-L services, a special teletex subnetwork was defined for a special class of users. The capability will be provided to make connections from the teletex network to the general datex network.

Linkage with the telex network will be effected via conversion equipment (TTU) which is physically located near the outgoing teletex transmission station. The converter takes from the teletex end equipment the complete, formatted teletext before it relays the text--after speed-code and protocol conversions--to the target telex station. In the reverse direction, these conversions must also be completed by the TTU; and, in addition, a page break must be made from telex endless to teletex A4 format.

CRT Text After 1983?

Among the public subscriber services for electronic text communication, CRT text is the only one which, because of economical end equipment, can address both the business and private sectors. Whether it will cover both sectors from the beginning in 1983 under the auspices of DBP or will initially serve only the business sector will be shown by the field tests now underway in the Duesseldorf/Neuss and Berlin areas.

End equipment for CRT-text service is the home color-television set. For the CRT-text connection, it requires an add-on component, the decoder. With the decoder it becomes a data display station which is connected by a modem (modulator/demodulator) to the telephone network and via these links to an EDP system can pick up the CRT-text central.

The telephone link to CRT-text central is automatically made by the CRT-text modem when the CRT-text function is selected on the TV remote control unit. Finally, the modem relays a connection acknowledgement which is required for subscriber identification and billing. CRT-text central sends back via the telephone link text and graphic information as a coded data stream. At the receiving end this is converted into standing TV pictures called CRT-text pages by the modem and CRT-text decoder. The transmission rate to CRT-text central is 75 bits/s and the return rate is 1200 bits/s. Each page received, which can consist of text or simple graphics in seven colors rastered in 24 lines of 40 characters each, is electronically stored in the TV receiver. It can then be viewed as long as desired without having to maintain the telephone connection.

The user communicates with CRT-text central via the keyboard of his TV remote control unit or via an expanded letter keyboard. By pressing the number keys he selects, as from a menu, the information he desires. Thus he determines step by step what he wants to see on his picture screen. Operation is so simple that even novices have no difficulties; thus, a computer which talks to everybody, so to speak.

CRT-text applications can be related to three areas: information retrieval, information exchange and access to data processing systems.

Thus, data processing results can be reported directly to other subscribers.

Also, direct communications can be sent to other subscribers of the service, such as greetings, greeting cards, appointments or other general letter-type material.

If the communication path extends through CRT-text central into the data processing system of an information offeror, then the manifold applications of data processing are opened up within the framework of the CRT-text computer association. Every user can directly and without intermediaries make contact with booking, ordering and reservation systems; call comprehensive data banks or use offered data processing programs for computations or programed instruction. And in the financial area for example it is possible to read one's bank balance, transfer funds and make credit and foreign exchange calculations via CRT-text.

Traffic between CRT-text subscribers and CRT-text central is cleared over the local telephone network. If communication requirements cannot be satisfied in one's own CRT-text central, then the other CRT-text centrals and also external computers, which are all integrated into a computer system by the new datex network with parcel delivery, can be reached. This computer association developed by the DBP is an important constituent of the CRT-text concept. It makes it possible for a CRT-text subscriber to go on line with the data processing facilities of information offerors without having to be concerned about the make and model of computer.

Certainly, it will also be possible to link CRT-text with existing text communication services; however, no forecast can yet be made about how and when this will be realized.

9160
CSO: 5500/2273

BRIEFS

TRANSATLANTIC FIBEROPTIC CABLE--The Federal German Post Office has plans to install a fiberoptic cable in 1988 as a transatlantic cable between the Federal Republic of Germany and the United States permitting 32,000 simultaneous telephone calls. According to an announcement by the Federal Post Office Ministry, another 4,000 calls can be made simultaneously via the transatlantic TAT cable opened in 1976, independent of satellite links. In 1983 the TAT7 cable providing for 4,200 calls, and in 1988 the above-mentioned fiberoptic cable will be added to the equipment [Text] [Wuerzburg ELEKTROTECHNIK in German 12 May 82 p 6] 9544

CSO: 5500/2280

HIGHLIGHTS OF APPROVED NATIONAL TELECOMMUNICATIONS PLAN

Rome POSTE E TELECOMUNICAZIONI in Italian Mar-Apr 82 pp 9-12

[Article: "National Telecommunications Plan Approved"]

[Text] In 1990 there will be 23 million telephone subscribers, with an annual increase of 1.2 million. The investments necessary for implementing the telepone-system development program will be on the order of Lit 2.725 trillion per year, 36.5 percent of which will be for switching installations, 26.8 percent for urban networks and 17.4 percent for interurban networks, while 19.3 percent will go for user terminals, real estate and equipment.

These are some of the data of greatest interest in the National Telecommunications Plan, presented by Minister of Post and Telecommunications Remo Gaspari and approved by the CIPE [Interministerial Council for Economic Planning] at its 24 March meeting.

Following is a summary of this important document.

The telecommunications plan submitted by the Ministry of PT [Post and Telecommunications] for consideration by the CIPE takes into account the multiyear programs presented to the ministry by the various managements and sets itself the objective of furnishing a series of chronological and economic quantitative indications, with regard to both the technologies and the services to be put to use for the coming decade.

From the technical point of view, a clear orientation as regards Italian TLC [telecommunications] policy is established; it can be summarized as follows:

a) long-term objective of a network with high degree of integration of the various services, to be achieved with time-schedules and modalities in accordance with the necessary evaluations of an economic and managerial nature as well as with the progress of technology;

b) the process of gradual numerization of the national, international and intercontinental networks (in the two functions of transmission and switching), as a primary factor for the subsequent integration of the services;

c) the use, if necessary, of specialized networks devoted to implementation of new services, to be considered temporary or "bridge" services while the integrated-services network is awaited, and to be designed, insofar as possible, to use techniques that can later be absorbed into the integrated services.

Especially as regards the numerization of the transmission lines and of the switching exchanges relative to telephone service, it is specified that it remains the necessary point of departure for achieving the integration of the various services, since the fact cannot be ignored that notwithstanding the considerable and at times "explosive" development that other services may certainly undergo, the telephone service (especially in areas that are far from saturation) will always represent the preponderant part of the entire TLC complex and will be the decisive sector and the one that governs all integration processes.

--As regards the transmission installations, in terms of overall need for circuits for the telephone network in relation to the design magnitude as of 1980, an increase of about 50 percent by 1985 and a doubling by 1990 are anticipated.

A considerable part of this imposing number of circuits will be of numerical type. The process of numerization will be faster at the lower levels of the network (urban hookups and district connections), and will then extend toward the higher levels.

--As regards switching, introduction of the new technologies, already begun, will proceed in a gradual manner and will then build up more and more steam, so that in 1985 numerical switches will be supplied in large quantities, more than was indicated in the CIPE resolution of 8 August 1980, which proposed for electronic switching a proportion of no less than 10 percent of total investments in 1985.

In order to accelerate this process, and in line with the CIPI [Interministerial Committee for Industrial Policy Coordination] resolution of 16 October 1979, the systems to be adopted will have to be reduced, with preference for the solutions (a tightly limited number of them) that are technically and economically better, with specific preference for those of Italian design that could also be produced for export.

The anticipated increase in telephone use will therefore have to take advantage of the contributions of technologies, for the following fundamental reasons:

--laying solid foundations for the integrated numerical network;
--raising the national industries to competitive levels of quality and quantity;
--laying the preliminary bases for subsequent gradual decreases in unit costs.

In the decade, the new switching equipment for local central exchanges should--taking into account the state of progress in the development of new technology currently under way, the indications supplied by the manufacturers, and the replacements necessary--evolve from the present technology to electronic technology that brings the newly supplied urban-exchange lines based on electronic technology to 1.45 million out of the total of 1.5 million expected for 1980.

A hypothetical accelerated program has also been considered that could be implemented if the national economy were to evolve in a positive direction, thus favoring a steady sustained market demand, and if the operators' economic and financial problems were to be resolved adequately, and that would definitely permit a better quantitative level of service from the point of view of the average demand anticipated.

In simpler terms, it could be possible, from 1987 on, to increase the previously indicated normal program of 900,000 subscribers by 20 to 25 percent, so as to achieve an annual increase of 1.2 million units. In this way, the number of subscribers in 1990 could exceed 23 million and replacement of electromechanical installations could also be accelerated, raising the number of old-technology lines replaced in the decade to about 1 million.

The investments needed for implementation of the development program for the entire telephone system (and excluding the greater part of the needs for development of the new services and for the satellite systems) are in the neighborhood of an average of Lit 2.725 trillion per year, at 1980 prices, with a slight growth in the second half of the decade to cover the replacement program.

Of the total investment, 36.5 percent will be devoted to switching installations, 26.8 percent to the urban networks, 17.4 percent to the interurban network, and 19.3 percent to the other categories, which include user terminals, real estate and equipment.

On the hypothesis of acceleration, the aforesaid investment would increase by Lit 500 billion (at 1980 prices) per year, on the average, for the years 1987-1990. Such a program would make it possible, among other things, to raise Italy to levels of development, for telephone use, comparable with those of the principal European industrialized countries.

As regards data service, development of the number of network installations is planned so as to raise the number of terminals to 330,000 in 1990, with growth greater than the forecasts of the Eurodata study and an investment of Lit 883 billion (at 1980 prices) in the decade.

Two network levels are provided for in the develoment plan:

a) higher level (primary network) articulated with specialized central exchanges designed to perform the functions of international and national data transit, and processing of the user terminal traffic in the area of competence directly connected with the users, with dedicated lines;

b) lower level (secondary network) articulated with central exchanges and installations for telephone-based data traffic, designed to perform the functions of collection of user input and concentration of that traffic, general processing of the traffic within the area of competence, and routing of transit traffic.

As regards the networks used, it can be said that while at present 76 percent of the data usage uses direct analog connections, as soon as the network specialized for data is available, with the circuit-switching and packet-switching services, 1990 usage distribution can be hypothesized with 30 percent of the network using packet switching, 10 percent using circuit switching, and the rest on direct connections or on the telephone network.

As regards telex, the plan forecasts 150,000 users in 1990, with investments of Lit 1.06 trillion in the decade and reduction of the current backlog of hookup applications in the next few years through the entry into service of the latest new electronic-technology central exchanges, to provide a total of 60,000 new numbers by 1985.

As regards New Services, the plan provides, after the experimentation in progress, for further development when advanced levels of the public networks or specialized networks are developed, and, looking to the future, the integrated network with integrated technologies and services, which will facilitate interconnection between the different types of terminals (analog, numerical, etc).

As regards facsimile, teletex and videotel in particular, the following can be noted:

a) Facsimile: This service, which involves transmission of facsimile documents of the original and is presently done on switched telephone networks, with about 5,000 users, will be capable of considerable development with the introduction of low-cost terminals with higher transmission speed. As soon as the data network is available, it will be possible to offer the same service with terminals capable of doing numerical-type transmission with higher quality and speed (datafax).

b) Teletex-Telepost: The teletex service, for which interconnection at the international level is planned, conisists in a service similar to telex but with higher transmission speed; with it, it will be possible to send written texts having the same characteristics as a letter rather than a telegram, and thus permitting electronic-mail service not typewriters [as published] (telepost).

It will be possible to implement this service, as soon as the standardized terminals are available, through use of the telephone network and of the telex electronic central exchanges, as emerges from the experiments already in progress in the FRG and Austria, with the collaboration of the Italian national industry. The availability of the data network (in 1983 in Italy) interconnected with the telex network, as well as with the telephone network and the foreign data networks, will also make it possible to offer the service on that network, on the national and international networks.

c) Videotel (international name: Videotex): Videotel, which is a service for interrogating data banks through the switched telephone network and uses the household television set, as well as special video terminals, has now been started up on the telephone network.

It will also be possible to use the packet-switching network in future for connections between other data banks and the videotel centers. The latter will govern the usage-connection operations, all the operational phases of the service, and collection of the elements necessary for billing. In any case, because of the delicacy of the questions relating to diffusion of information and access to it, it must be pointed out that the administration will have to promulgate suitable norms in this matter with the operational action that will result from them, maintaining relations directly with the suppliers of information and with the owners of the data banks as regards admission to the service.

d) Televideo (international name: Teletext): Televideo is an information service carried out on the broadcasting networks with the sending of data-bank pages in the television-picture transmission intervals and can be received on the standard television set, appropriately adapted. For this service also, experimentation is under way that takes into account the systems so far proposed or started up in Europe and makes it possible to deal with the problems of compatibility, at the television level, with the Videotex service.

e) Videoconference: This service permits connection between conference rooms remote from one another through video and telephone connections. The setting-up of the first connection between Rome and Milan is in progress. The service will subsequently be developed in the other cities with possibility of conferences among three or four rooms in different localities.

The Plan also devotes a chapter to satellites, pointing out that with the well-known "medium-term space plan," which provides, in the area of TLC, for the building and placing in orbit, in 1985-1986, of an experimental and preoperational satellite with extremely advanced technology and operating in the 20-30 GHz range, with on-board switching and designed for narrow-band numerical connections among many traffic centers, it is proposed first of all to develop the qualifications of the Italian space industry in the most complete manner possible.

The medium-term space plan, with these initiative in the area of TLC, is therefore to be considered as a research effort of broad scope that will be able to produce notable results, from the industrial point of view, even within the present decade.

As regards the operational use of a national satellite, though, to be considered as the logical and natural consequence of the research action undertaken, it is reasonable to take the 1990's as the reference point, even if the national network will be able to benefit from the preoperational phase that will develop at the end of the 1980's.

Direct broadcasting via satellite, characterized in Europe by the TV-Sat and L-Sat projects, raises the necessity and interest for Italy of starting up as soon as possible a national experimental service that could, in particular, serve as a stimulus to the national industry to begin as soon as possible the designing and production of terminals for the purpose, so as to keep the industry from being outstripped in both the domestic and foreign markets.

On the other hand, and also independently of that, the technical and economic advantages that can be foreseen for direct broadcasting via satellite make it advisable to start up some specific projects, even if experimental, during the 1980's. In this regard, a chapter of the Plan is devoted to development of TLC and its problem areas, and especially to the relationships between TLC services and territory, the problems of research and development, and industrial and employment policies.

It is noted that the subscribers of the major urban networks (more than 100,000 subscribers), who in 1970 represented 50 percent of the total, have dropped to 34.7 percent, and it is expected that they will hit 28 percent in 1990, while distribution of usership by broad categories is expected to show a residential-family proportion of 83 percent in 1990.

Regarding the problems of research, an allocation of Lit 450 billion is hoped for, as an allocation reserved for TLC and to be drawn from the IMI fund for large-scale Applied Research, and another Lit 300 billion as an allocation reserved for TLC and to be drawn from the Fund for Technological Innovation that is to be set up.

The advisability of supporting intersectorial strategic areas such as software and components is also cited, and for components its is considered necessary to approve a normative instrument for the purpose--on the model of law 227/1977--that would appropriate about Lit 120 billion in 3 years.

As regards the problems of employment, according to a general estimate, in the area of manufacture and installation of TLC in Italy, there would be in 1990 as against 1979, in the absence of compensatory measures, an overall reduction of between 20,000 and 25,000 persons.

In the area of operations, though, on the assumption of steady and sizable increase in telephone use, there will be an increase that can be estimated at 10,000 to 15,000 persons for the next decade.

Therefore, mobility toward the operating companies, greater penetration of our products into the foreign markets, and development of new services must be anticipated.

Finally, a chapter is devoted to quality of service, and the need to adopt appropriate "main indexes of service quality" is underlined.

It is further mentioned that the organs of the Ministry of PT (which will be given the appropriate powers and the investigative means necessary) will periodically examine these indexes to determine the way they are going and program improvements of them.

Finally, the overall investments for the various services in the decade (at 1980 prices) are summed up in a table.

In approving the orientations and objectives contained in the Plan and the investment volumes related to them, the CIPE confirmed the necessity of a review of the agreement norms that govern the relations between the state and concessionaires and stressed the advisability of achieving balanced financing of the SIP with modification of the tariff-control procedures, recourse to credit, and recapitalization through large input from private savings also.

The approval of the National Telecommunications Plan (and of the programs of the STET Group for the 3-year period 1982-1984) by the CIPE has been greeted with broad consensus and satisfaction by important companies operating in the vast sector of telecommunications. This event represents a significant turning point for the entire telecommunications sector, declared Michele Principe, deputy administrator of the STET, who stated in a communique that the CIPE, "in addition to approving the fundamental document that sets out the telecommunications development objectives for the next decade, has drawn up a series of actions that will ensure to the firms of the STET Group, the SIP in particular, the enormous resources necessary, in investment terms, for achieving those objectives. These actions fall within the framework of an overall vision of revival and upgrading not only of the service firms but of the entire sector of the group's manufacturing firms. This means, in concrete terms, the safeguarding of the employment levels, and in prospect, a new dimension and a more significant role for the entire national telecommunications industry. The tariff-policy orientations also conform to criteria that are in line with the government's economic policy, which is aimed at containing inflation, and provide for a gradual increase in rates which for the year 1982 will remain well below the anticipated rate of inflation and also will not, in practice, affect private users. Marisa Ballisario, deputy manager of ITALTEL, spoke of "extremely positive example," stressing the fact that this is "the first time that a 10-year plan for telecommunications in Italy has been approved." In a statement released to the Italia agency, she said that for "ITALTEL this is an event of fundamental importance: the company strategic plan, laid down in 1981, indicates the approval of the national telecommunications plan as one of the basic conditions for the recovery, the revival and the very survival of a national company with autonomous planning capacity."

11267
CSO: 5500/2272

END

6

JPRS 81562

17 August 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 233

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 81562

17 August 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 233

CONTENTS

ASIA

AUSTRALIA

Details Reported on Satellite, Pay TV for Outback
(David Noble; THE SYDNEY MORNING HERALD, 15 Jun 82)....... 1

Briefs
Solar Phones 2

BANGLADESH

Plans To Extend Telecom Network Told
(THE BANGLADESH OBSERVER, 14 Jul 82)...................... 3

University Professor Develops Indigenous Microcomputer
(S.M.A.K. Mojahedy; THE BANGLADESH OBSERVER, 16 Jul 82).. 4

INDIA

Delhi Meeting Discusses Information for Third World
(PATRIOT, 17 Jul 82)...................................... 5

Committee Gives Guidelines for Radio, TV News
(THE HINDU, 14 Jul 82).................................... 6

INSAT-1A Called Symbol of Inefficiency
(S. Kumar; THE TIMES OF INDIA, 15 Jul 82)................. 8

Telecommunications Expansion Planned for Northeast
(PATRIOT, 18 Jul 82)...................................... 9

Doubts Expressed About French Phone Technology
(THE TIMES OF INDIA, 19 Jul 82)........................... 10

Positioning of Satellites Discussed in Rajya Sabha
(PATRIOT, 20 Jul 82).................................... 11

Briefs
Devanagari Keyboard 12
Microprocessor Technology 12
INSAT-1A Lifespan 13
INSAT Solar Sail 13
Inadequate Use of INSAT 13
Apple Momentum Wheel 14

PAKISTAN

Woes of Pakistani Telephone User Discussed
(KHYBER MAIL, 21 Jul 82)................................ 15

PEOPLE'S REPUBLIC OF CHINA

Briefs
Xinjiang Kirgiz Broadcasts 17

EAST EUROPE

ALBANIA

Plans for Expanding Television Broadcasting
(Agron Aranitasi, Vullnet Musaraj; SHKENCA DHE JETA,
Mar-Apr 82).. 18

LATIN AMERICA

BERMUDA

Government Gives Unconditional OK for ZBM Takeover of ZFB
(THE ROYAL GAZETTE, 10 Jul 82)........................... 21

CHILE

Government Approves New Telecommunications Law
(EL MERCURIO, 20 Jul 82)................................ 22

GRENADA

Briefs
Satellite Ground Station 26

JAMAICA

Briefs
Jamintel Development 27

NEAR EAST AND NORTH AFRICA

DJIBOUTI

Nationwide Telecommunications Network Put Into Service (LA NATION DE DJIBOUTI, 10 Jun 82)........................ 28

UNITED ARAB EMIRATES

Briefs
INTELSAT Membership 30

SUB-SAHARAN AFRICA

ANGOLA

Briefs
No Phones to Portugal 31

GHANA

Briefs
Forthcoming New Radio Channel 32
Direct International Calls 32

SWAZILAND

Establishment Television Authority Control Board Praised (Editorial; THE SWAZI OBSERVER, 10 Jul 82)................ 33

Briefs
Earth Satellite Station 34

ZIMBABWE

Briefs
Radio, TV License Fees 35

WEST EUROPE

CANADA

Quebec, France Agree on Exchanges of TV Programs
(Rodolphe Morissette; LE DEVOIR, 17 Jun 82).................. 36

FINLAND

Agency Defies Ministry; Cable TV Tests To Continue
(HUFVUDSTADSBLADET, 13 Jun 82)............................. 39

Turku Gets Country's First Optic-Fiber Phone Cable
(HUFVUDSTADSBLADET, 12 Jun 82)............................. 41

FRANCE

PTT Receives Private Financing To Make Up for Lost Funds
(Jacques Jublin; LES ECHOS, 2 Jun 82)...................... 42

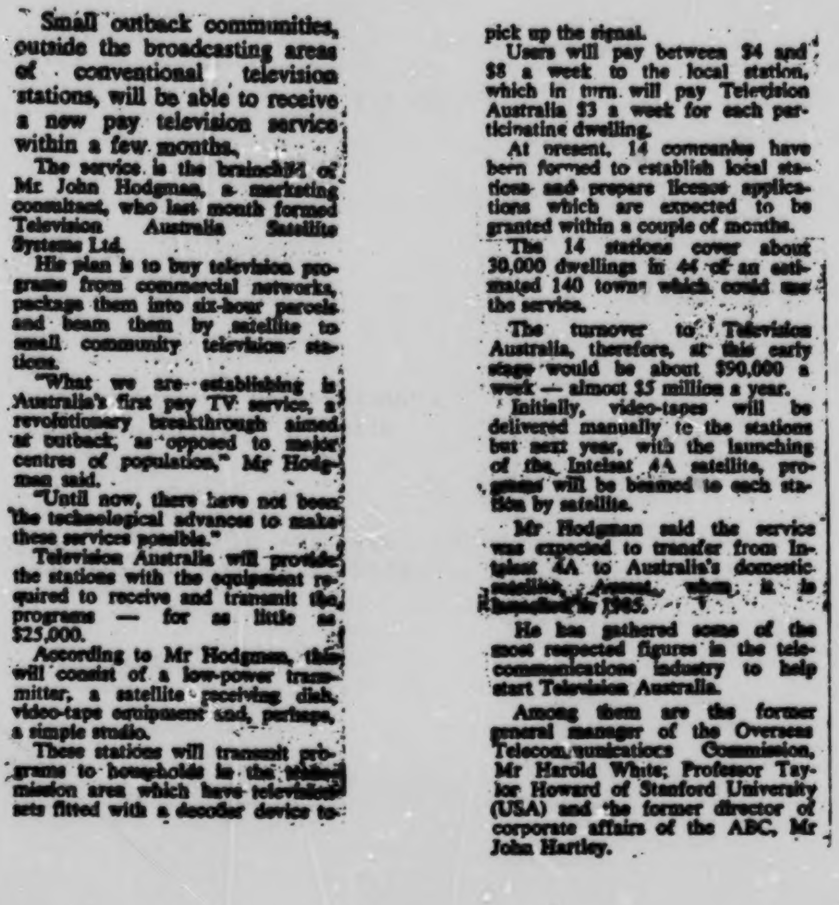
Briefs
Fourth TV Station in 1983 44
Thomson-CSF in Saudi Arabia 44
Broadcasting Station in Caribbean 44

DETAILS REPORTED ON SATELLITE, PAY TV FOR OUTBACK

Sydney THE SYDNEY MORNING HERALD in English 15 Jun 82 p 15

[Article by David Noble]

[Text]



Small outback communities, outside the broadcasting areas of conventional television stations, will be able to receive a new pay television service within a few months.

The service is the brainchild of Mr John Hodgman, a marketing consultant, who last month formed Television Australia Satellite Systems Ltd.

His plan is to buy television programs from commercial networks, package them into six-hour parcels and beam them by satellite to small community television stations.

"What we are establishing is Australia's first pay TV service, a revolutionary breakthrough aimed at outback, as opposed to major centres of population," Mr Hodgman said.

"Until now, there have not been the technological advances to make these services possible."

Television Australia will provide the stations with the equipment required to receive and transmit the programs — for as little as $25,000.

According to Mr Hodgman, this will consist of a low-power transmitter, a satellite receiving dish, video-tape equipment and, perhaps, a simple studio.

These stations will transmit programs to households in the transmission area which have television sets fitted with a decoder device to pick up the signal.

Users will pay between $4 and $8 a week to the local station, which in turn will pay Television Australia $3 a week for each participating dwelling.

At present, 14 companies have been formed to establish local stations and prepare licence applications which are expected to be granted within a couple of months.

The 14 stations cover about 30,000 dwellings in 44 of an estimated 140 towns which could use the service.

The turnover to Television Australia, therefore, at this early stage would be about $90,000 a week — almost $5 million a year.

Initially, video-tapes will be delivered manually to the stations but next year, with the launching of the Intelsat 4A satellite, programs will be beamed to each station by satellite.

Mr Hodgman said the service was expected to transfer from Intelsat 4A to Australia's domestic satellite, Aussat, when it is launched in 1985.

He has gathered some of the most respected figures in the telecommunications industry to help start Television Australia.

Among them are the former general manager of the Overseas Telecommunications Commission, Mr Harold White; Professor Taylor Howard of Stanford University (USA) and the former director of corporate affairs of the ABC, Mr John Hartley.

CSO: 5500/7553

BRIEFS

SOLAR PHONES--Solar-powered telephone and radio facilities will be used in construction camps on the Dampier-Perth natural gas pipeline. A contract for the telephone facilities has gone to the WA-based Photon Energy Co. Twenty small-capacity solar-powered stations will be constructed for the telephone and radio system. Each station will consist of 16 solar modules of 35 watts each, an alarm module and a charge controller. The Minister for Fuel and Energy, Mr Jones, said that the solar power concept was unusual because it was completely mobile and could be moved along the pipeline as sections were completed. "The facilities are essential for the State Energy Commission's pipeline programme and will facilitate the vital coordination of materials, plant and labour and the exchange of design information," Mr Jones said. He said that the first three systems would be delivered next month and the rest by January 1983. The Photon Energy Company is a division of Good Samaritan Industries and the WA distributor for the United States-based Arco Solar Inc. [Text] [Perth THE WEST AUSTRALIAN in English 14 Jun 82 p 22]

CSO: 5500/7553

PLANS TO EXTEND TELECOM NETWORK TOLD

Dacca THE BANGLADESH OBSERVER in English 14 Jul 82 p 1

[Text]

KHULNA, July 13:— The DCMLA and Minister for Communications Rear Admiral M. A. Khan said here on Tuesday that government has taken up a dynamic programme for extension of telecommunication network to far-flung areas of the country to promote trade industry and commerce, reports BSS

The DCMLA was addressing the workers of Bangladesh Cable Shilpa Ltd. on Tuesday morning. He asked them to maintain industrial peace and assured them that more production by the workers will help the factory in giving them further bonus from its profit.

He was happy to know that the company has already paid three bonuses to the factory workers from its profit.

The Minister exhorted the workers to maintain the tempo of production as the product of the factory would be required to meet the growing needs of cables for connecting the far flung areas including all the thanas within the network of telecommunication during the present fiscal year. He stressed the need for proper and effective telecommunication system to promote country's economy and in maintaining link with the outside world.

The DCMLA assured the workers that a firm government order for T. and T. will be given for full utilisation of the factory capacity. The government he said, will also endeavour to have the products exported to the countries requiring our cables in greater quantities.

The workers assured the DCMLA of their total commitment for highest rate of production. They also welcomed various government measures for improving the lot of the labour force of the country.

Earlier the DCMLA went round various sections of the factory. He was happy to observe that maximum production was being maintained in the factory saving a large amount of foreign exchange for the country.

Bangladesh Cable Shilpa Ltd. established in 1971 is capable of producing about 3,30,000 conductor kilometre of different types of telecommunication cables per year.

The DCMLA also visited the Khulna GPO and Telephone Exchange. He directed the authorities concerned to complete the GPO building as soon as possible. He was told that Khulna Telephone Exchange had an excess capacity of 40 per cent. He asked the concerned officials to hold meeting of Telephone Allotment Committee immediately and allocate telephones to applicants.

CSO: 5500/7193

UNIVERSITY PROFESSOR DEVELOPS INDIGENOUS MICROCOMPUTER

Dacca THE BANGLADESH OBSERVER in English 16 Jul 82 p 8

[Article by S. M. A. K. Mojahedy]

[Text] Micro computer can be used extensively in Third World countries to increase efficiency and productivity in industries and other financial institutions. This mini-computer serving the desired purpose can successfully computerise the industrial production, traffic control, power supply, water plant, telephone exchange, banks and hospitals.

This mini-computer can now be designed and developed in Bangladesh by our own experts.

Dr Syed Mahbubur Rahman Assistant Professor of the Faculty of Electrical and Electronic Engineering of Bangladesh University of Engineering and Technology, has designed a new micro computer recently.

Dr Mahbubur Rahman while showing his micro-computer told this correspondent that his innovation will help computerise the industries, telephone exchanges hospitals etc. of our country. He said that the disadvantages of our industries like slow production rate, low quality of products, managerial inefficiency could be overcome if we use micro-computer in the industries. He said our engineers are equally talented compared to those of the developed countries and can even expertise in computerising any organisation thus reducing the dependence on foreign exchange and foreign experts.

Dr Rahman has proved that a computer, the highest technology of the modern world, can also be designed and developed by our own experts. He said that five to seven times of the cost in foreign exchange could be saved if we computerise any organisation by our own experts. A computer will help an industry in boosting productions, increasing managerial efficiency and process control.

He urged the Government and industrialists to come forward in computerising the industries and other organisations with our own experts so that our products can compete in the international market.

Dr. Rahman and a lecturer of BUET, Khan Md Golam Kibria, are now jointly doing research work on designing of Bengali display and Bengali keyboard by which a computer can be communicated.. It is reported that the research work will be completed very soon.

Incidentally Dr Mahbubur Rahman designed a universal micro-computer system for industrial automation while he was in Hungary which is now being used in a glass factory there.

It was learnt that a micro-computer if imported will cost Taka 2.5 lakh in foreign exchange, but if it is made locally, it will cost only Taka 30,000 in foreign exchange for material cost in addition to Taka 20,000 for craftsmanship.

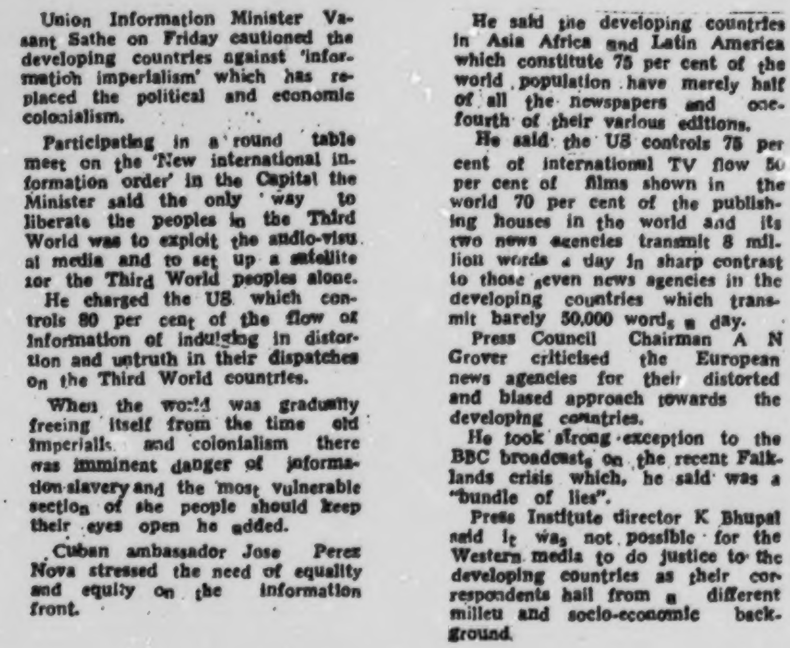
CSO: 5500/7194

INDIA

DELHI MEETING DISCUSSES INFORMATION FOR THIRD WORLD

New Delhi PATRIOT in English 17 Jul 82 p 10

[Text]



Union Information Minister Vasant Sathe on Friday cautioned the developing countries against 'information imperialism' which has replaced the political and economic colonialism.

Participating in a round table meet on the 'New international information order' in the Capital the Minister said the only way to liberate the peoples in the Third World was to exploit the audio-visual media and to set up a satellite for the Third World peoples alone.

He charged the US which controls 80 per cent of the flow of information of indulging in distortion and untruth in their dispatches on the Third World countries.

When the world was gradually freeing itself from the time old imperialism and colonialism there was imminent danger of information slavery and the most vulnerable section of the people should keep their eyes open he added.

Cuban ambassador Jose Perez Nova stressed the need of equality and equity on the information front.

He said the developing countries in Asia Africa and Latin America which constitute 75 per cent of the world population have merely half of all the newspapers and one-fourth of their various editions.

He said the US controls 75 per cent of international TV flow 50 per cent of films shown in the world 70 per cent of the publishing houses in the world and its two news agencies transmit 8 million words a day in sharp contrast to those seven news agencies in the developing countries which transmit barely 50,000 words a day.

Press Council Chairman A N Grover criticised the European news agencies for their distorted and biased approach towards the developing countries.

He took strong exception to the BBC broadcasts on the recent Falklands crisis which, he said was a "bundle of lies".

Press Institute director K Bhupal said it was not possible for the Western media to do justice to the developing countries as their correspondents hail from a different milieu and socio-economic background.

CSO: 5500/7187

COMMITTEE GIVES GUIDELINES FOR RADIO, TV NEWS

Madras THE HINDU in English 14 Jul 82 p 7

[Text] NEW DELHI, July 13.

The Parthasarathi committee, set up to examine the working of All India Radio and the television set-up, has suggested a professional approach to the presentation of news.

The guidelines, formulated by the committee, stress the need for balance and objectivity in the coverage of political controversies. As regards ministerial statements, it says the focus should be on information rather than on individuals.

The guidelines have been accepted by the Information and Broadcasting Ministry and circulated to media units.

The following are some of the suggestions of the committee:

There has to be a clear understanding of the difference between news and views. The reporting of news has to be factual, accurate and objective and only such views, as make news should find a place in news broadcasts.There can be no editorialising in broadcast news.

News value: Each news story should be judged strictly on the basis,of its news value.

In the selection of news received from wide-ranging sources and in news editing, AIR and Doordarshan should be guided by the highest possible professional standards. While newsworthiness will determine the selection of news, its treatment and presentation should be directly related to the special characteristics and potential of each medium as well as the target audiences.

No speculation: The broadcast news should satisfy the highest criteria of accuracy and responsibility. AIR and Doordarshan cannot indulge in speculative stories of the type which appear in certain journals. They should develop their own sources for the verification of events.

In a developing country like ours, a special function of broadcasting should be the coverage of development, its significance, achievements and problems.Development news covers a wide range of activities — economic, technological, social and cultural. It should not be confined to mere statements and plans but explain their significance.

The style and method of news reporting should reinforce the fundamental principles on which national policies are based. These fundamental principles include territorial integrity, national integration, secularism, maintenance of public order and upholding the dignity and prestige of Parliament, State Legislatures and the Judiciary.

Focus on information: Ministerial statements on policy matters, particularly those of the Prime Minister, are important in as much as they enable the people to understand national policies. Similarly, implementation of Government programmes should be given proper place in the news. The focus should be on information rather than on individuals. It is also necessary that views critical of official policies and the manner of their implementation should find adequate time.

Balance needed: In reporting on political controversies the broadcast media should be guided by objectivity and fair play. Due representation of differing viewpoints should be the aim. If a variety of viewpoints cannot be projected in the same bulletin, the balance should be achieved within a reasonable period of time.

In the choice of international events the objective should be to keep the people informed of world developments. A special effort should be made to give proper background of events. In the selection of news, greater attention should be given to events in developing countries, particularly our neighbours.

Apart from strictly pruning and editing the copy from the world agencies which have an overload of news from advanced countries and also a subtle bias, it would be desirable for AIR to use copy from the non-aligned news pool and other third world agencies on news merits. What is most essential is for AIR to increase the number of its foreign correspondents and carefully select their location and area of news coverage so that we can project a view of world developments as seen by India and other non-aligned and developing countries.

National interest: AIR and Doordarshan should aim at creating an informed public opinion on international events and developments. In preparing programmes in news and current affairs, the national interest must be kept in mind. The national policy of peace and peaceful co-existence, non-alignment, friendship with all countries, support for people fighting for independence and freedom and the struggle against racism and racial discrimination and for an international order based on justice and equality should be highlighted. This does not exclude the reporting of any significant criticism of Government's foreign policy, either in its content or in its implementation.

Internal evaluation of news and current affairs programmes after their broadcast should be a reguler exercise on a daily basis. A panel of outside experts for news and current affairs in a particular language should be considered.

Choice of personnel: The implementation of these policies and norms will depend upon the professional capacity of the people who run the news and current affairs programmes. The choice of personnel is most important. A professional must have had training in news work. He should be able to choose the items well and to rewrite the stories to suit the medium. Professional training and appreciation of the role of the media in a democratic society will give him the confidence to take the right decisions.

CSO: 5500/7185

INSAT-1A CALLED SYMBOL OF INEFFICIENCY

Bombay THE TIMES OF INDIA in English 15 Jul 82 p 4

[Article by S. Kumar]

[Text] INDIA'S first multi-purpose, operational satellite, INSAT-1A, is neither "A1" nor fully "operational", even after three months of its launch.

While idling its time away in space, INSAT-1A is fast turning into a symbol of commercial failure and an absence of modern management systems in the country.

Already, the life of the satellite has been drastically reduced to two-and-a-half years from the projected seven years. When all the intended functions of the satellite are about to be carried out, the satellite itself would have run out of its life.

The only money-spinning part of the satellite is the telecommunication segment. While a promise of about 8,000 two-way voice channels was held out, at least half the number, if operational, would have sufficed. But, till today hardly 50 channels are operational. The post and telegraphs department hopes to increase the load on the satellite "gradually" and the process may run into several months.

The major earth station at Yevur near Bombay, has just begun to operate four channels of the INSAT against the earmarked 400 channels. Another 16 channels are likely to be put to use in the next few months.

The chairman of the space commission, Prof. S. Dhawan, while defending the Rs. 275-crore INSAT project, said that the satellite would earn its cost through the telecommunication segment in three years. But, in reality the effective operation of the satellite will not be three years. Also the post and telegraphs department has the capability to use only a portion of the available circuits.

Satellite communication will be economically viable only when the two places are separated by above 1,700 km. For distances shorter than this, the existing microwave and coaxial cable links have been found to be viable. Thus, satellite communication will be mainly useful in connecting the normally inaccessible areas.

Giving allowance to the genuine technical problems, the fact that the country is ill-equipped to utilise a sophisticated satellite is a sad comment on the policy makers, planners and managers. No one seems to be bothered about the government's and the various department's complacency over such a project involving huge investment.

A communication expert attributed this to the total lack of "modern communication culture" in the society. To illustrate the point, the state-owned Hindustan Teleprinters, once convened a meeting of experts and it chose to inform the members about the meeting by post. The letter reached a member seven days after the meeting was over and it bore the stamp of many stations. It is appalling that Hindustan Teleprinters, a propagator of modern communication equipment, does not even possess the sense to use either the telephone or a telex for communication.

RURAL TELECAST

The use of INSAT in telecasting programmes to the rural areas is in no better situation. As things stand today, the space department has offered to lend the INSAT for TV programmes for just two hours in the evenings every day. More time could not be spared because of some technical snags.

Even for telecasting programmes during the two hours, over selected areas, the departments concerned are not yet fully ready. Hectic co-ordination meetings are being convened to inaugurate the TV via INSAT by August 15. While the major metros of Bombay, Madras, Calcutta and Delhi may be able to get TV programmes on the national hook up, the rural areas depend on the expensive direct receiving sets, which are said to be on the production line.

The INSAT project seems to be proving that mere possession of a satellite does not mean much and the proof of its success lies in using it properly. Maybe, experts would try to justify the project as a forerunner to the future communication revolution. If INSAT-1A is termed an experiment, is it worth spending Rs. 275 crore on an experiment?

CSO: 5500/7186

TELECOMMUNICATIONS EXPANSION PLANNED FOR NORTHEAST

New Delhi PATRIOT in English 18 Jul 82 p 5

[Text] Several steps have been taken by the Posts and Telegraphs Department for the development of telecommunication services in the North-Eastern region during the Sixth Five Year Plan, reports PTI.

These include automisation of manual exchanges at district headquarters, introduction of sophisticated technology in switching as well as in transmission fields and introduction of satellite communication facilities to cater to the needs of the remote areas.

A provision of Rs 75 crores has been made in the State's current five years Plan for this purpose, according to an official release in the Capital on Saturday.

It is also proposed to open three more telex exchanges at Jorhat, Kohima and Silchar for providing better telegraph facilities. The existing exchanges at Shillong, Gauhati and Tinsukia are also going to be expanded. The total capacity to be added in the region is 190 lines.

It is also proposed to open 330 long distance post and equal number of telegraph offices for extending the telecommunication services in the interior, tribal and backward areas during the plan period.

For integrated telecommunication development, Mokokchang, Kohima, Tuensang and North Lakhimpur have been selected the release adds.

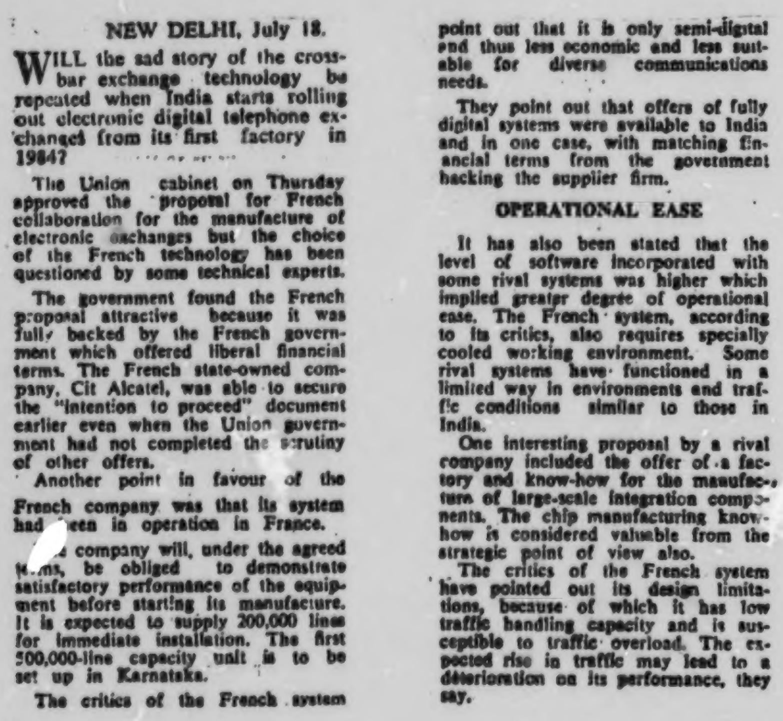
Provision of telephone connection practically on demand by 1985, provision of automatic telephone exchange at the district headquarters as far as possible opening of new telephone exchanges at all places having a registered demand of 10, irrespective of the cost, connecting of State Capitals to national trunk dialling network and provision of STD from district headquarters to their respective State Capitals are some of the other objectives of the Sixth Plan.

CSO: 5500/7188

DOUBTS EXPRESSED ABOUT FRENCH PHONE TECHNOLOGY

Bombay THE TIMES OF INDIA in English 19 Jul 82 p 9

[Text]



NEW DELHI, July 18.

WILL the sad story of the crossbar exchange technology be repeated when India starts rolling out electronic digital telephone exchanges from its first factory in 1984?

The Union cabinet on Thursday approved the proposal for French collaboration for the manufacture of electronic exchanges but the choice of the French technology has been questioned by some technical experts.

The government found the French proposal attractive because it was fully backed by the French government which offered liberal financial terms. The French state-owned company, Cit Alcatel, was able to secure the "intention to proceed" document earlier even when the Union government had not completed the scrutiny of other offers.

Another point in favour of the French company was that its system had been in operation in France.

[illegible] company will, under the agreed terms, be obliged to demonstrate satisfactory performance of the equipment before starting its manufacture. It is expected to supply 200,000 lines for immediate installation. The first 500,000-line capacity unit is to be set up in Karnataka.

The critics of the French system point out that it is only semi-digital and thus less economic and less suitable for diverse communications needs.

They point out that offers of fully digital systems were available to India and in one case, with matching financial terms from the government backing the supplier firm.

OPERATIONAL EASE

It has also been stated that the level of software incorporated with some rival systems was higher which implied greater degree of operational ease. The French system, according to its critics, also requires specially cooled working environment. Some rival systems have functioned in a limited way in environments and traffic conditions similar to those in India.

One interesting proposal by a rival company included the offer of a factory and know-how for the manufacture of large-scale integration components. The chip manufacturing know-how is considered valuable from the strategic point of view also.

The critics of the French system have pointed out its design limitations, because of which it has low traffic handling capacity and is susceptible to traffic overload. The expected rise in traffic may lead to a deterioration on its performance, they say.

CSO: 5500/7190

INDIA

POSITIONING OF SATELLITES DISCUSSED IN RAJYA SABHA

New Delhi PATRIOT in English 20 Jul 82 p 5

[Text] **RAJYA SABHA members on Monday expressed concern at the positioning of American spy satellites over the Indian Ocean space zone and demanded that the Government do something about it.**

The government expressed its inability to do anything about the spy space probes, but assured the House that in matters of communication satellites, it was mobilising the developing countries to ensure that western nations did not mobilise the entire geo-stationary orbital space just because they have been up there first.

The issue was raised by Dr Najma Heptullah who drew the Government's attention to the fact India was getting a raw deal in getting the most suitable place or 'slot' in space for its satellites because of the congestion up there.

Dr Heptullah also cautioned against increasing activity of the western spy probes. She recalled that when Indian marine scientists discovered poly-mettalic nodules in the Indian Ocean the US manoeuvred one of its space probes to a position above the Indian Ocean to see what India was doing. This was a positive threat, Dr Heptullah said.

Minister of State for Communications Yogendra Makwana said the Government could not do anything about these space probes.

Communications Minister C M Stephen then assured members that India was busy mobilising the support of the developing nations to press for equitable distribution of the 'slots' in geo-stationary orbit and the radio frequency bands which are used for communication. The issue will be discussed at two international conferences scheduled to be held in 1985 and 1987. A special cell had been set up in the Communications Ministry where specialists are preparing a strong case for India and the developing countries.

As Mr K C Pant (Ind), pleaded that both the communications and space departments try to have a 'futuristic' outlook in their policy approaches in this vital field, Mr Stephen again assured that India was keen to ensure that it did not suffer for its late entry into space.

Mr Stephen admitted that the best possible slot in the geo-stationary orbit at 36,000 km over the equator could not be procured for INSAT as Indonesia had already been given the allotment.

Referring to the problem of congestion of the geo-stationary orbit (GSO), Mr Stephen said it was considered by the World Administrative Radio Conference 1979 (WARC-79) convened by the International Telecommunication Union (ITU), the specialised agency concerned with this matter.

At WARC-79, on the initiative of India, in consultation with other countries, ITU decided to convene special world conferences in 1985 and 1987 to plan the use of GSO and the related radio frequency spectrum so as to ensure guaranteed and equitable access to these limited resources by all countries, he added.

He said India was also participating in the efforts of ITU to develop appropriate cost-effective techniques for more efficient use of these resources so as to reduce congestion.

CSO: 5500/7192

BRIEFS

DEVANAGARI KEYBOARD--The Communications Ministry has set up a committee to evolve a new key board for Devanagari electronic teleprinters to be manufactured by the Hindustan Teleprinters Lmited, Madras, reports UNI. Teh specifications would provide for adaptation of the teleprinter to work with Roman as well as Devanagari scripts. This information was given in the Capital on Saturday by Communications Minister C M Stephen at a meeting of the Dak Tar Hindi Salahkar Samiti. Briefing the committee members on the measures taken by the department to propagate the use of Hindi, Mr Stephen said that five posts of senior Hindi officers had been sanctioned for the Hindi speaking States at Lucknkow, Bhopal, Jaipur, Patna and Delhi. One post of Hindi officer for each office of the department had also been created and these would be filled up soon. Mr Stephen said that special information services in Hindi had been opened at Delhi, Patna, Lucknow, Jaipur and Bhopal telephone districts and would be opened in other cities soon. [New Delhi PATRIOT in English 18 Jul 82 p 5]

MICROPROCESSOR TECHNOLOGY--MADRAS, July 18 (UNI)--The country's telecommunication system will receive a boost when the microprocessor technology for speedy transmission of telegrams, now employed experimentally here, will be put into commercial operation on July 28. The "store and forward telegram system" (SFT), does away with manual re-transmission at intermediate offices, reducing the time by more than half. Mr. U.D.N. Rao, general manager of the Tamil Nadu Telecommunication Circle, said 14 telegraph offices had been linked to the system. Dr. Rao said that the SFT, a marvel of indigenous technology, would store messages in the "memory" received from different telegraph offices and after automatic analysis would re-transmit them to their destinations in accordance with the order of priority. The "memory" can retain 160 messages of 30 words each at any given time and transmit 120 messages an hour on each, he said. He said that messages could be transmitted non-stop whether the line was working or not. The system's automatic device to check any break or failure could indicate it by an alarm. The operator could then "dump" all the messages for that line into an external "memory" from which they could be called back and transmitted when the line was restored, he added. [Bombay THE TIMES OF INDIA in English 19 Jul 82 p 14]

INSAT-1A LIFESPAN--Bangalore, July 23 (PTI)--The life of India's multi-purpose communication satellite INSAT-1A would be curtailed from seven years to two and half years because of the firing of thrusters and the non-deployment of the jammed solar sail, according to Dr P.K.M. Bhat, manager INSAT-one master control facility at Hassan. Speaking at the institution of engineers here tonight, Dr Bhat said the thrusters which consumed more fuel were fired to correct the solar torque disturbance. Originally, this disturbance was to be controlled by wheels inside the satellite. Dr Bhat said the non-deployment of the jammed solar sail would also result in the curtailment of the time of television transmission. [Text] [New Delhi PATRIOT in English 24 Jul 82 p 4]

INSAT SOLAR SAIL--Ahmedabad, July 25 (PTI-UNI)--The ISRO Scientists will use some "violent" method at a later stage to open the solar sail of "INSAT" India's first operational communication satellite launched in April last, according to a spokesman of the Space Applications Centre (SAC) here. The non-opening of the solar sail was interfering with the balancing of the satellite which in turn would come in the way of operating the TV transponders for a long time, the spokesman told PTI here today. The space scientists were disinclined to tackle the solar sail problem immediately. They apprehended that any such attempt might create new problems in the spacecraft which was operational now. A drastic method to open up the solar sail would be tried after several of the planned INSAT utilisation programmes were carried out, the spokesman said. Meanwhile, a regional centre for INSAT data processing for resource evaluation and hazard prediction would be located in Bangalore, Union Minister of State for Steel amd Mines Ram Dulari Sinha said on Saturday in Bangalore. She told newsmen that this would be one of the five centres to be set up in the country for utilisation of data from the INSAT satellites. Mrs Sinha, however, did not specify whether the INSAT-1A now in orbit or the INSAT-1B scheduled for launch early next year would be used for the purpose. She said the Bangalore centre would be managed by the Geological Survey of India and would be equipped with computer facilities for processing the data. [Text] [New Delhi PATRIOT in English 26 Jul 82 p 8]

INADEQUATE USE OF INSAT--Ahmedabad, July 24 (UNI)--Space Application Centre [word indistinct] Prof E.V. Chitnis here today regretted that the country had not done adequate preparations to utilise the potentialities of the first Indian national multi-purpose satellite INSAT. Delivering the keynote address at a seminar on INSAT utilisation organised here by the Gujarat Science Academy, Prof Chitnis said for want of planning the entire television transponder on board the INSAT was being under-utilised. He said though the country had sufficient know-how on using communication satellites for telecasting educational programmes for the rural masses not a single direct reception system had so far been installed for this purpose. Prof Chitnis said considering the meagre preparation which had been done to utilise the TV segment of INSAT it was doubtful if the communication satellite would be able to fulfil its purpose. He said "what we need is economic and political will without which we have nothing significant can be done for the betterment of the people." The Centre is preparing a feasibility report for using INSAT-1A for dissemination of news. Disclosing this, Dr K. Narayanan of the INSAT Utilisation Project said that various news agencies could directly distribute news to their newspaper subscribers through the satellite replacing the teleprinter lines leased from the Posts and Telegraphs Department. The experiment of publishing facsimile editions of "The Hindu" through the experimental communications satellite, APPLE, had been "very successful," he said. [Text] [New Delhi PATRIOT in English 25 Jul 82 p 5]

APPLE MOMENTUM WHEEL--Bangalore, July 20 (UNI)--Indian space scientists have successfully commissioned the indigenously developed momentum wheel for attitude control necessary to keep the vital C-band antenna of APPLE, the country's first experimental communication satellite, pointed towards earth. The attitude control of the satellite which was launched on 16 July last year by the Ariane launcher from the French Guianese space centre of Kourou, was hitherto being achieved by the momentum wheel, one of the many redundant systems aboard the APPLE. It will qualify for use in future domestic multipurpose communication satellites and help space scientists to model and plan the Indian remote sensing satellite in the latter half of this decade. [Text] [New Delhi PATRIOT in English 21 Jul 82 p 7]

CSO: 5500/7195

WOES OF PAKISTANI TELEPHONE USER DISCUSSED

Peshawar KHYBER MAIL in English 21 Jul 82 p 3

[Text] In various countries of the West, telephones are organised on a commercial basis. The company concerned installs them with pleasure as it means another client added to the list, meaning more income. If the clients have any complaints they are immediately looked into and removed to the satisfaction of the patrons. In our country the telephone department is a colossus which seems to have been set up to satisfy the egotism, greed and whims of the officials who are supposed to run it. At the outset, the installation of a new connection is the first great hurdle to cross. Applicants are kept hanging for years for a new connection, even after they have paid the requisite fee under a demand note issued to the more fortunate. The explanations are too "technical" for anyone to question them. We wonder why the Telephone Department does not pre-arrange all the potential needs and be ready to cater to the needs of clients at a moment's notice. We, however, suspect this to be a racket to invite corruption. Once installed, the subscriber is at the mercy of the Accounts Department. Over-billing has become a tradition. In answer to protests, the client is always proved wrong. It is stated that recording of calls is done by machine and the subsequent billing by computers. There is a lot of clear misstatement in this. It is true that machines do the recording of calls emanating from a particular number. But the linemen who can fix a call anywhere on the wires have the capacity to connect calls to any number. That is an underhand activity which it is difficult to catch. It is because of this that quite a large number of businessmen and others have standing arrangements with telephone personnel to keep their bills within an agreed minimum for which others have to pay through the nose.

Then every month, the readings on the recording machines are taken by operators or other petty officials which are then fed into a computer which only does the printing on the bills. This involves a lot of personal error and the use of a computer is completely a misnomer to mislead and befool the clients. In general, the accounts people refuse to entertain a revision of the bill on any grounds whatsoever. Then the telephone is cut without any notice to the subscriber. A man may be out of town or seriously sick or have a thousand other reasons for delays which must be taken into consideration. It appears the telephone is not an instrument of use but a luxury over which the department presides to indulge its own form of high-handedness and blackmail. The commercial aspect of the undertaking between the department and the subscriber is hardly taken into consideration. There are official rackets going on under the very nose of the Government. We know of a person whose phone was disconnected when he had gone abroad. On return he did not take any measures to have it restored. There came to him an official who made a proposition, suggesting that he sue the postal department for not delivering a registered notice to be issued with a back date, and properly receipted by the postal authorities, fully in cahoots with the telephones. By arrangements between lawyers, damages would be realised and shared out three ways, the phones, the Postal Department and the subscriber. Our friend did not like the proposition and unceremoniously drove out the official who brought the proposition.

That was just an example. Now we come to facts concerning us. Our Rawalpindi correspondent has a telephone at his residence. Its bills began registering increasing figures each month in 1980-81. In December 1980 the bill was only Rs. 130, quite normal. But by August 1981 it reached the figure of Rs. 1860. The correspondent could not look after the bills as he was too much involved in the major operation and treatment of his wife. In December 1981 (26th), the phone was cut with a balance of Rs. 7,920. He approached the D.G. for instalments as well as a reconsideration of the bill. The latter was not even attended to; but the balance due was allowed to be paid in 10 instalments, starting February 23. The first bill for January 1982 showed 60 local calls while it was in a state of disconnection. A protest letter was ignored and has not been replied to till now. This certainly is not playing the ball, business way. Then last month, after four instalments of the arrear bill a normal monthly bill for April was issued without instalments being mentioned, though last date was June 29. But on June 23 the phone was disconnected. It was reconnected when the correspondent himself went to bring the matter to the notice of the accountants. But a fortnight later the phone was again cut. It is said the accountants of the Satellite Town office are angry at the request for instalments has been granted, and determined to harass the subscriber. The fact is simple. If instalments were not granted, the telephones would lose all its arrears. Being a journalist on limited income, if instalments were granted, he would retain the phone and the department would gets its outstanding. But the Accounts Department, at a lower level, feels they have lost a lucrative "client," and are angry. This kind of harassment and other things have to be looked into.

CSO: 5500/5878

BRIEFS

XINJIANG KIRGIZ BROADCASTS--Beginning from 28 June, the Xinjiang broadcasting station will run a program in the Kirgiz language. This embodies the party policy on nationalities. The region has some 100,000 people of Kirgiz nationality, the majority of whom live in Kizilsu Kirgiz Autonomous Prefecture. The four counties in the autonomous prefecture have set up wired broadcasting stations and 37 communes in the autonomous prefecture have set up broadcast amplifying stations. All county broadcasting stations have run programs in the Kirgiz language to publicize the party's central work. [HK010233 Urumqi Xinjiang Regional Service in Mandarin 1300 GMT 25 Jun 82 HK]

CSO: 5500/4021

PLANS FOR EXPANDING TELEVISION BROADCASTING

Tirana SHKENCA DHE JETA in Albanian No 2, Mar-Apr 82 pp 10-12

[Article by Agron Aranitasi and Vullnet Musaraj: "The Present and the Future of Our Television Technology"]

[Excerpts] The history of Albanian television began in 1959 when experimental television equipment was set up for the first time in an old building belonging to Radio Tirana. For several years, experimental work was carried out on limited and irregular schedules. The beginning of regular programs coincided with the broadcasting of the proceedings of the 6th Congress of the Albanian Workers Party in November 1971. From that time on, our television developed rapidly. Compared to 1971, the number of broadcasting hours has doubled and the range of broadcasts has been expanded considerably. In 1971, we had only one powerful station while today we have a whole network of powerful stations and many transmitters with capacities ranging from 0.5 watts to 1 kw of power, set on various points. Thus, most of the zones of the country are covered by television signal. The technical quality of the transmitters has been improved considerably and, in particular, their stability has been strengthened. Evidence of this is the fact that in 1980-1981, the television network had only 1-2 minutes of outages a month, compared to 20 minutes a month in 1975-1976.

The improvement of the stability and technical quality of the transmitters is connected with the raising of the scientific and technical level of the specialists and workers and the modernization of television technology.

Today, modern equipment which represents the very latest in television technology, is being used every day in television, along with equipment of a relatively old technology. For example, in Albanian television, for some years now, we have been filming in color, to a limited extent, using an advanced technological process and the results have been good. The television studios have been using electronic generators for special effects, an electronic writing or printing generator, constructed by means of the technology of digital diagrams, a number of generators with synchronized impulses and controls for blending pictures, constructed on the basis of the same technology, etc.

In particular, a good part of the equipment for recording pictures on magnetic tape, which is being done today with a magnetoscope, uses advanced technology. Our television uses the newest generation of magnetoscopes of the quadruplex family which are equipped with digital time correctors.

Now, our television transmits and records from various places, outside the television studios. For this purpose, permanent cable connections have been installed to many cultural, artistic and sports institutions in Tirana. Additional direct connections can be made with other points in Tirana by means of radio-relay equipment.

The successes in the quantitative and qualitative improvement of television technology and programs have been accompanied by the development of the production of television sets in Albania. Thus, 1971, which marks the beginning of regular television programming, was also the first year of the series production of television sets in the URT [Radio and Television Plant] in Durres. Today, a great number of the television sets produced in Albania have integrated circuits and transistors, which ensure proper operation and highest quality. The great increase in production is an important indicator of the development of the television production industry. Compared to 1971, the number of television sets produced has increased 70 times; there is one television set for every 12 inhabitants.

The mountainous terrain of our country has posed and still poses the main problem in distributing the television signal all over the country. Therefore, during this five-year plan, several powerful transmitters will be constructed to cover those zones where the signal is weak and the reception is poor, while in the areas where there is no signal, a number of relay stations will be set up.

The introduction of color television will be an especially important success. Since there are differences in the transmitting of color broadcasts compared to black and white, most of the equipment (85 percent) will be different. Broadcasting in color poses other important problems, such as lighting, decor, etc. The entire lighting system in all the studios has to be changed. For example, in order to transmit the proceedings of the 8th party congress in color, the entire lighting system in the hall where the congress took place was changed.

In order to implement the recommendations of Comrade Enver in regard to the transmittal of color television broadcasts, a study was made by television specialists and it was decided that the transition would take place gradually, from year to year. According to this study, a large part of the changes will take place during 1982. This year, in addition to equipping some studios for color broadcasts it is essential that all common equipment which is known as central apparatus also be adapted for this purpose. The collection and broadcasting of all types of signals takes place in this apparatus.

At the present time, it is of utmost importance for television workers to learn how to operate the color television apparatuses which have been installed recently. They were produced during the 1978-1980 period; they have a very advanced technology and require a very high level of knowledge. During 1982 there are plans to broadcast in color a good part of the news programs, the major programs for children, variety programs and a good part of the sports activities and of the cultural and artistic activities which take place outside the television studios.

Along with the development of the transmitting of programs in color we will progress to the production of the appropriate color television sets. Workers and specialists in the URT in Durres are working to put on the market the first lot of color television sets.

Our television successfully passed its first test with the broadcasting, in color, of the proceedings of the 8th party congress and some other events such as the 20th radio and television song festival and the New Year's concert. But this is only a good beginning.

CSO: 5500/3016

GOVERNMENT GIVES UNCONDITIONAL OK FOR ZBM TAKEOVER OF ZFB

Hamilton THE ROYAL GAZETTE in English 10 Jul 82 pp 1, 2

[Text]

Bermuda Broadcasting Company has been given the unconditional Government consent it was seeking for the planned takeover of ZFB.

At their annual meeting yesterday, Bermuda Broadcasting, which runs ZBM, received confirmation that the merger would not affect licences for the two television stations "in any way", Senator the Hon. Quinton Edness, managing director of ZBM said last night.

The approval, given by the Hon. Sir John Sharpe, Minister of Home Affairs, gives Bermuda Broadcasting a free hand in the running of the joint businesses and clears the path for the final transfer of ZFB shares.

"However, the Minister did note that he intends to have a complete review of the entire telecommunications area," said Senator Edness.

Some 97 percent of ZFB shares have been tendered to ZBM since the $470,000 takeover was announced in March. But ZBM's offer to buy shares in return for cash and 'shares in Bermuda Broadcasting remained conditional pending final Government consent and clarification over restrictions on the licences.

Said Bermuda Broadcasting president Mr. Martin Smith: "The directors have today made the offer unconditional which means that the transfer of all the shares tendered will now go through."

Mr. Smith said there were now only 4,000 shares which had not been tendered and Bermuda Broadcasting was now trying to track down the few shareholders who have not come forward, some of whom appear to have left the Island.

The owners of 70 percent of the shares, including Gibbons Company, had already agreed with the deal when the merger was announced and since then B.B.C. have been seeking to buy the remianing 30 percent.

Mr. Smith also revealed yesterday that the company's profits for 1981 dipped by some $200,000 from the previous year. According to the B.B.C. annual report \net income for 1981 was $454,000 compared to $665,000 in 1980.

"Our company in 1981 shared with most businesses the difficulties arising from the April disturbances in Bermuda and a deepening international recession," he said in his president's report.

"The results for the year are disappointing when compared with the \previous year." He said the profit drop had been caused by running expense increases which had outweighed a slight rise in revenue.

CSO: 5500/7552

GOVERNMENT APPROVES NEW TELECOMMUNICATIONS LAW

Santiago EL MERCURIO in Spanish 20 Jul 82 p C-1

[Text] Yesterday, during an extraordinary session, the Government Junta approved the draft of a new General Telecommunications Law. The bill was submitted to the Legislative Branch in April 1980. The law contains 35 articles and 5 provisional articles grouped under five headings: General Provisions, Concessions and Services, Exploitation and Operation of Services and Violations and Penalties.

The law begins with a definition: "Telecommunications is understood to mean all transmissions, emissions or receptions of signs, signals, written material, images, sounds and data of any kind by wire, radioelectricity, optical media or others."

The law goes on to say: "All inhabitants of the republic will have free and equal access to telecommunications and any person can avail himself of the concessions and licenses established by the law, unless specifically excepted thereby."

The law classifies telecommunications services in four categories:
a. Free-reception telecommunications services, whose transmissions are destined for the free and direct reception of the public in general. These services include audio, video and other kinds of emissions. b. Public services and telecommunications destined to satisfy the needs for telecommunications of the community in general. These services are designed to interconnect with other public service telecommunications. c. Limited telecommunications services whose purpose is to satisfy specific needs of designated enterprises, organizations or persons previously agreed to by them. These services can cover the same kinds of emissions as those mentioned in category a. of this article and the provisions of these services does not permit access to traffic from or to subscribers of the public telecommunications networks. d. Services for amateur radio operators, whose purpose is radio intercommunication and technical and scientific experimentation on a personal, nonprofit basis.

The law goes on to say that the installation, operation and exploitation of telecommunication services located in national territory, including the territorial waters and air lanes, will be governed by the standards embodied in this law and by the provisions of the international telecommunications agreement in Chile. The law is also applicable to installation systems which use electromagnetic waves for purposes other than telecommunications.

The law provides, however: "The provisions of the preceding paragraphs are not applicable to free-reception television, which will be subject to the provisions of special laws which authorize it, without detriment to the technical standards established by the law; and, without detriment to the interpretative rules embodied in the Civil Code, the meaning of the terms used in this law which are not defined therein shall preferentially be that which is assigned to it by the country's international agreements on telecommunications."

The law provides that the Ministry of Transportation and Telecommunications, through the Undersecretariat for Telecommunications, is responsible for the application and control of this law and its regulations. The law adds that the Undersecretariat will be exclusively responsible for the technical and administrative interpretation of the legal and regulatory provisions governing telecommunications.

This notwithstanding, the law states that control of all or part of telecommunications during this constitutional hiatus will be the responsibility of the Ministry of National Defense, as established in the pertinent legislation.

Concessions and Licenses

"Free-reception or radiobroadcasting telecommunications services, public telecommunications services and services limited to television will require concessions granted by Supreme Decree before they can be installed, operated and exploited. Concessions will also be required for installations of any kind destined for the intermediate service necessary to the providing of the services mentioned in various preceding paragraphs," the law stipulates.

It goes on to say: "Concessions will be for an indefinite period, with the exception of radiobroadcasting concessions which will be valid for a period of 15 years, unless the interested party requests a shorter period."

The law adds: "Limited telecommunications services and those of amateur radio operators will require licenses issued by the Undersecretariat of Telecommunications before they can be installed, operated and exploited."

"Licenses will be for a period not to exceed 5 years and will be renewable for equal periods. Limited services operating within the confines of an installation will not require concessions or licenses," the law says.

"Telecommunications for the institutional use of the Armed Forces, Carabineros of Chile, Investigations and the National Information Center will not require concessions or licenses and will not be subject to the expiration provisions."

The law also says: "The granting of concessions and licenses will not be subject to restrictions and limitations with respect to quantity and equipment and kinds of service and/or their geographic location; and more than one concession or license can exist in the same geographic area."

The granting of telecommunications concessions and licenses should have the prior written authorization of the Ministry of National Defense which will be issued by the Armed Forces Telecommunications Committee.

Concessions for radiobroadcasting telecommunications services and services limited to television will in addition need the written authorization of the National Radio and Television Council.

"Concessions for free-reception radiobroadcasting services and limited television services will be granted to natural persons, Chileans, over 21 years of age, and to public or private corporations established in conformity with the laws of the country and with residence in Chile. With regard to partnerships, the partners must be Chileans. As for corporations and stock companies, their president, directors and manager and administrators must be Chileans. The administrators and representatives of associations and foundations must also be Chileans. The addition of new partners or members to partnerships, associations and foundations and the subscription and transfer of corporations and stock companies must have the prior authorization of the Undersecretariat of Telecommunications," the law stipulates.

Rates

"The prices or rates for public telecommunications services within the national territory and those extending abroad will be freely determined between the providers of the service and the users. This provision will also be applicable to the intermediate services for which contracts are reached by the parties involved in such services. If the regulatory conditions in the market are insufficient to ensure a system of free competition, or monopoly situations or other distortions of a similar nature arise, the Ministries of Transportation, Telecommunications and Economy, Development and Reconstruction will have the authority to establish such a system."

Further on the law states that public telecommunications services are authorized to install their own systems or to use those of other companies consistent with the concessions granted to them. All professional parties providing public international services will have access to the use of satellite systems under conditions of equality in the technical and economic sectors, in accordance with the terms of the concession and the agreements between the parties.

Finally, the law states: "Current telecommunications regulations will remain in force provided they are not incompatible with the present law until such time as this law's regulations are issued."

Current concessions will continue in accordance with the time frames agreed to when they were granted.

"As for the action of the National Radio and Television Council and until the organic law becomes effective, the functions which Article 17 of the present law confers upon this entity in relation to TV will be exercised by the National Television Council."

8143
CSO: 5500/2312

BRIEFS

SATELLITE GROUND STATION--St Georges, 6 Aug (AFP)--Grenada will install a satellite groundstation to receive Soviet radio and television programs. This topic was discussed during Grenadian Prime Minister Maurice Bishop's recent visit to Moscow, Radio Free Grenada reported. The Grenadian prime minister said that "This will make it possible to break imperialism's cultural yoke on Grenada" and to receive news "from progressive and socialist programs different from the garbage from the United States that we must now watch." Meanwhile, the Grenadian radio station noted that the Soviet Union has donated steel equipment and farming material valued at $4 million and that it signed an agreement to purchase cacao, nutmeg and bananas from Grenada at fixed prices over a 5-year period. These trade agreements with the USSR will permit Grenada to diversify its trade relations and to develop new markets, Bishop said. During his trip to Moscow, Bishop also obtained a line of credit for $7.5 million, payable in 10 years at an interest rate of 3 percent and with a grace period of 3 years. This credit will permit the construction of the satellite groundstation and will help to finance studies on the possible construction of a port on the island's eastern coast. [Text] [PA091826 Paris AFP in Spanish 0240 GMT 7 Aug 82]

CSO: 5500/2319

BRIEFS

JAMINTEL DEVELOPMENT--Contract for a two-floor vertical extension to the Jamintel Centre, North Street, Kingston which will cost $1.2 million was signed yesterday. The extension will cost $887,000 and will be used to accommodate a new international telephone exchange and provide additional office accommodation. The total cost will be $1.2 million. The project is the third phase of the company's capital development programme. The first phase involved modifications to the Prospect Pen Earth Station in St Thomas, including the construction of two new antennae and a control building which is almost complete. The second phase involving the installation of the TASI (Time Assignment Speech Interpolation) equipment to increase the capacity of the Jamaica-Florida submarine cable, is in progress. The programme which will continue into 1987 will cost $70 million, including U.S. $31 million in foreign exchange. The contracts were signed yesterday by Mr Trevor G. Mignott, General Manager of the company and Mr Selvin Wallace of the contractors, McGregor and Levy Limited. In attendance was the Minister of Public Utilities, the Hon Pearnel Charles. The construction programme is expected to begin in August. [Text] [Kingston THE DAILY GLEANER in English 2 Jul 82 p 1]

CSO: 5500/7552

NATIONWIDE TELECOMMUNICATIONS NETWORK PUT INTO SERVICE

Djibouti LA NATION DE DJIBOUTI in French 10 Jun 82 p 5

> [Text] With the opening of the nationwide telecommunications network, the distance barrier separating Ali-Sabieh and Obock is broken. The official unveiling ceremony: At this moment, the prime minister called the commissioners of the interior districts one by one.

On Saturday, 5 June, prime minister Mr Barkat Gourad Hamadou officially put into service the national microwave telecommunications network which will from now on automatically link the four major cities of the interior districts by telephone, not only to the capital, but also to each other and to countries abroad.

This achievement, which constitutes an important step in the evolution of telecommunications in the Republic of Djibouti, follows the opening of a ground station last year, and most recently, the establishment of new automatic telephone links with Ethiopia at the beginning of this year.

"An Arduous Task And An Important Investment"

Briefly describing the efforts made to achieve this project, Mr Youssouf Ali Chirdon, director of the Post and Telecommunications Office, said that this operation required first of all "the furnishing and putting into place of the microwave links themselves with the necessary telephonic instruments, carried out by the French Telecommunications Company (SAT) thanks to financing by the Kingdom of Saudi Arabia in the amount of 120 million Djibouti francs."

"The second part of the project consisted of putting into place the essential supports and in particular necessitated constructing five towers, certain of which were in areas with extremely difficult access, three constantly air-conditioned buildings sheltering delicate material, and finally 6 km of electrical lines in a region inaccessible to vehicles." "I will note in passing," declared Youssouf, "the construction of the Ambokto tower near Ali-Sabieh, for which 20 tons of concrete and several tons of material had to be brought by helicopter to the base of the worksite, on a high mountain of the region."

The director added that "The financing of this second part of the project, in the amount of 80 million Djibouti frances, was carried out by the Post and Telecommunications Office."

Today 30 telephone lines link each district, and in less than two months this capacity will be doubled.

Thus, a great gap has been filled because, as Chirdon emphasized at the time, if it were necessary and essential, considering our type of economy, to facilitate and increase our country's relations with the outside world, it was equally important to develop the domestic network and to bring to the people of the Ali-Sabieh, Dikkil, Obock and Tadjourah districts the same telephonic facilities enjoyed by the capital's inhabitants. There is no doubt that this new instrument, which breaks the distance barrier between people, will contribute enormously in bringing together the men and women of this country, while at the same time easing the struggle for economic and social development which we have just begun.

9939
CSO: 5500/5834

BRIEFS

INTELSAT MEMBERSHIP--Abu Dhabi, 26 Jul (UNI)--The United Arab Emirates (UAE) has become the 42nd member of the International Marine Satellite Organisation (INTELSAT), it has been announced here. INTELSAT works to improve maritime communications through satellites. It also seeks to promote the peaceful use of space communications. The UAE recently enacted a commercial maritime law to foster the country's maritime fleet. The law requires all UAE vessels to fly the flag of the country. [Text] [GF311237 Kuwait ARAB TIMES in English 30 Jul 82]

CSO: 5500/4733

BRIEFS

NO PHONES TO PORTUGAL--In a note to our newspaper, the ENATEL [National Telecommunications Company] has informed telephone subscribers that telephone connections to Portugal are seriously affected. The ENATEL added that since the breakdown has occurred outside the country it is not possible to estimate the delay in repairs. [Text] [Luanda JORNAL DE ANGOLA in Portuguese 22 Jul 82 p 2]

CSO: 5500/5880

BRIEFS

FORTHCOMING NEW RADIO CHANNEL--The government will soon introduce a new local radio channel in the broadcasting service. Mr Ato Austin, Secretary for Information, announced during a visit to a transmission station at Ejura that the new station would broadcast advertisements in local languages and also enable illiterate population to keep abreast of the current affairs of the revolution. [Text] [London WEST AFRICA in English No 3390, 26 Jul 82 p 1962]

DIRECT INTERNATIONAL CALLS--Direct international telephone calls on a trial basis have begun in Accra. If the trial proves successful, the system will ease the congestions often experienced at the P&T External. According to an official of the Post and Telecommunications Corporation, full operations would start this week. [Excerpt] [London WEST AFRICA in English No 3390, 26 Jul 82 p 1964]

CSO: 5500/5879

SWAZILAND

ESTABLISHMENT TELEVISION AUTHORITY CONTROL BOARD PRAISED

Mbabane THE SWAZI OBSERVER in English 10 Jul 82 p 4

[Editorial: "Good News"]

[Text] THE recent publication in the Government Gazette of the Swaziland Television Authority Bill which will establish a Board of Control to monitor the content of programmes and other transmissions has brought some good news.

If the Bill goes through parliament, as we hope it will, the appointment of the five-member board of control will be speeded up. We say this because one of the duties of the Board is to ensure that the content of the programmes conform with "accepted moral standards".

In the past, we have watched programmes that could rightly be considered detrimental to Swazi children and culture. With the establishment of the Board we hope such programmes will be censored. For an example, kissing in public clashes with our culture, particularly for children.

Although it is not clear in the published Bill what is meant by "other transmissions", we hope that the Board's duties will also include the censoring of films shown in local cinemas.

The composition of the Board as to who should be on it is also of great importance as there should be no clashes of cultures and taste.

The Board will also be responsible for erecting TV stations in the kingdom. But before engaging in this, we hope the Board will make NTBS screen as much local programmes as possible, including films from other countries in Africa.

This would necessitate the establishment of communal TV centres in rural areas where people who can't afford to rent TV sets could watch events of national importance. This is done in other developing countries.

We hope that one of the first duties of the Board would be to control TV rentals which are very high. We believe that there should be more advertising on TV than now if a campaign was launched. As it is now, money is lost on time spent playing interludes instead of having advertisements.

We also hope that the Board will encourage both formal and informal educational TV programmes and discussions on topical subjects of national interest.

TV programmes should be geared to suit both literate and illiterate Swazis.

CSO: 5500/5877

BRIEFS

EARTH SATELLITE STATION--A report from Mbabane says building is expected to begin soon on a $4 million satellite earth station in Swaziland to bring telecommunication services to international level and to reduce dependence on South Africa. The station will also enable Swaziland to receive live television transmissions from Europe and the United States. The Export Corporation in Canada has provided $3 million for the project which should be in operation by June next year. Swaziland has also signed an agreement with the Canadian Government for a grant of about $900,000 to send technicians, engineers and accountants to Canada for training in satellite communications. [Text] [Johannesburg International Service in English 0630 GMT 29 Jul 82 LD]

CSO: 5500/5883

BRIEFS

RADIO, TV LICENSE FEES--RADIO and television licences rose 60 percent under regulations gazetted yesterday. A radio licence goes up from $5 to $8, while a television licence now costs $32 instead of $20. Both increases have been approved by the Minister of Information, Posts and Telecommunications, Dr Nathan Shamuyarira. On April 2 this year, radio licences were raised to $7, and $28 for television, but both increases were cancelled a week later. The director-general of the Zimbabwe Broadcasting Corporation, Cde Tirivafi Kangai, would not comment on the increases yesterday, but said a statement would be released soon. [Text] [Harare THE HERALD in English 17 Jul 82 p 1]

CSO: 5500/5872

QUEBEC, FRANCE AGREE ON EXCHANGES OF TV PROGRAMS

Montreal LE DEVOIR in French 17 Jun 82 p 6

[Article by Rodolphe Morissette]

[Text] Starting on 1 January 1983, for a 3-year period Quebec will sell to the three French television channels 100 hours of Quebec programming each year. At the same time, channel TVFQ-99 will broadcast 2,500 hours of French television in Quebec.

The contract between the Quebec ministry of intergovernmental affairs and the Quai-d'Orsay covering the period from 1979 to 1982 is about to expire. It called for the unilateral broadcasting of 2,500 hours of French television on TVFQ, to be handled through a consortium of cable distributors in Quebec named the SETTE [Editing and Recoding Company, Ltd]. In the beginning the Quebec government's negotiators wanted the contract to be renewed from 1982 through 1985 to contain a reciprocity clause, with Quebec to sell to France 500 hours of Quebec television or films each year. They finally settled on 100 hours at commercial rates. According to the ministry of intergovernmental affairs, this will mean earnings of about $600,000 for Quebec each year.

This jump to exports of 100 hours a year is enormous, when we realize that in 3 years (from 1977 to 1979), Radio Canada, the ONF [National Film Office], Radio Quebec, and TVA [expansion unknown], all together, managed to sell to the three big French television channels a grand total of 22 hours, with 12 hours provided by Radio Canada, and eight by the ONF.

The agreement in principle on the new 3-year contract between Quebec and the Quai-d'Orsay was approved at the end of April by the two prime ministers during Pierre Maurois's trip to Quebec. It is part of the general cooperation agreement (amounting to $10 million) between France and Quebec. Now the administrative details of the contract with TVFQ are being worked out.

About a month ago, a Mr Braband, a French citizen representing the three French television channels, came here to see if he could find any film and television material worth sending to France. He apparently did find some of interest, but raised the possibility that some Quebec productions might have to be dubbed (into French) to be understood in France.

The annual joint Quebec/Quai-d'Orsay budget for the exchange of television programming will be about $2 million for each of the next 3 years. The budget includes three major categories of expenses. The largest is the payment of royalties to authors (primarily French). For this item the two governments will pay together (in equal shares) $1.5 million in 1983, $1.75 million the following year, and $2.10 million in 1985, or an average of about $600 to $840 per hour.

The two governments will also share technical expenses paid in France for the recording and retaping of programs being sent to Quebec. In 1982, this cost each of the two governments $195,000; in the new 3-year contract, this amount will be indexed to the cost of living (+ 14 percent in France this year), with an adjustment because of the devaluation of the franc.

Then the Quebec ministry of communications will pay about $100,000 a year for the purchase of recording reels, for customs duties on the French material arriving on weekly Air France flights, and for the transport of this material from the Mirabel airport to the SETTE facilities in Brossard. Quebec is now trying to reach an understanding with the Quebec cable distributors who will use these reels, so that the cable distributors would pay an increasing portion of the costs over the next 3 years (first 10 percent, then 30 percent, and finally 60 percent).

Once at Brossard, the French reels will be recoded for our broadcasting system, then will be transmitted by satellite to the Quebec cable distributors, who will then retransmit the French programs to Quebec households which have cable. The SETTE will pay for this part of the operation, but the Canadian Broadcasting and Telecommunications Council has authorized the cable distributors to charge a monthly fee, varying according to the region, to the 850,000 cable subscribers who can receive TVFQ. (It costs 25 cents a month for subscribers in the Montreal region).

The Quebec government negotiators are trying to get the three French television channels to pay more attention to the distribution, as stipulated in the contract, of the major categories of television programming (youth shows, documentaries, drama, variety shows, sports and news/talk shows). It is felt in Quebec that the three French channels have some trouble in exporting 2,500 hours suitable for Quebec television, which means that they resort to padding, using short fillers taken from the files of the National French Audiovisual Institute.

A poll done by the CEGEM [expansion unknown] which specializes in public affairs and publicity, last year showed that 48 percent of the potential audience of TVFQ, approximately 350,000 households, watched the channel for several hours each week. The head of the SETTE, Mr Rejean Myre, told LE DEVOIR that recent Nielsen reports indicate that the TVFQ broadcasts are most popular during the daytime, then on weekends. The TVFQ broadcasts (50 hours a week) are shown in the evening from 1700 to 2430, and then repeated on the same day the following week from 0930 to 1700 hours.

According to Mr Myre, the French broadcasts are most popular in the Quebec region, and then in the area of Lac-Saint-Jean. The Quebec government insisted on negotiating such an exchange wth France in order to help to balance the American broadcasts which are quite popular in French-speaking households in Quebec.

7679
CSO: 5500/2301

AGENCY DEFIES MINISTRY; CABLE TV TESTS TO CONTINUE

Helsinki HUFVUDSTADSBLADET in Swedish 13 Jun 82 p 22

[Text] For the time being at least, the Posts and Telecommunications Board does not intend to heed the request from the Ministry of Communications that it discontinue test transmissions of satellite TV programs. The agency has sent the ministry a letter in which it stresses the importance of the tests. The Posts and Telecommunications Board points out that it is important that the cooperation with Helsinki TV continue and that the test transmissions also be started in Rovaniemi.

A couple of months ago, the Ministry of Communications sent the Posts and Telecommunications Board a letter in which it complained that government funds were being used for experiments with the reception of TV programs via the OTS satellite. The ministry urged the Posts and Telecommunications Board to promptly discontinue its cooperation in the project.

Claim for Damages

In its response, the Posts and Telecommunications Board says that the Ministry of Communications got involved in the matter too late. The Posts and Telecommunications Board decided to join in the experiment back in January, and activity began in March. Helsinki TV has also announced that if the Posts and Telecommunications Board discontinues its participation in the experiment, the agency can expect a claim for damages and possibly a lawsuit.

The Posts and Telecommunications Board emphasizes that when the two parties drew up the contract, it was agreed that the experiment would continue as long as the OTS satellite was available. It also points out that TV viewers would react negatively if the transmission of programs were suddenly halted.

According to the Posts and Telecommunications Board, the receiving equipment that has already been installed in Rovaniemi provides good results for comparison with the experiment in Helsinki. Satellite TV transmissions over the Rovaniemi cable system would also provide a positive picture of government activity.

The Ministry of Communications refers in its letter to the fact that a law on cable television is currently being drafted. The ministry feels that it is not reasonable to use government money to start new forms of cable television activity while the law is still being drafted.

Posts and Telecommunications Board Should Be Active

The Posts and Telecommunications Board answers that no basically new form of cable television activity is involved. Nor is the experiment establishing any lasting basis for permanent arrangements or legislative work. The Posts and Telecommunications Board also points out that if it does not take an active part in the arrangements for transmitting satellite programs, someone else will.

The Posts and Telecommunications Board refers in its letter to cable television's economic and technical advantages in comparison with a community antenna on each building. It says that television satellites increase the need to establish local government-owned broadcasting networks. The satellites also provide opportunities for marketing those systems.

11798
CSO: 5500/2288

TURKU GETS COUNTRY'S FIRST OPTIC-FIBER PHONE CABLE

Helsinki HUFVUDSTADSBLADET in Swedish 12 Jun 82 p 4

[Text] Turku--On Tuesday the Turku municipal telephone company became the first in Finland to begin using an optic-fiber cable system for transmitting telephone calls. It involves a 5.3-kilometer-long optic-fiber cable between the central telephone exchange and the Paaskyvuori subsidiary exchange, and the exceptional feature, compared to a normal connection, is that the new 34 Mbit/s system operates as a transmitter of light beams using a laser so powerful that no repeaters are needed on the line.

In a normal cable, repeaters are required every 1.7 kilometers on the average. The new transmission system's capacity is 480 voice channels, of which 30 are currently in use. More connections will come into use this fall with new technology.

As a matter of fact, it can be said straight out that as usual, the cooperation between L.M. Ericsson and the Turku Telephone Administration means new achievements in our country, and Veikko K. Tahti, telephone chief in Turku, has told HUFVUDSTADSBLADET that in no way does it look like that cooperation is going to stop.

He also pointed out that Turku's telephone company intends to use the new technology with optical fibers when it expands its system. In reality, our country's basic telephone network is already relatively well developed, but a few gaps are naturally going to appear.

Optic-fiber cables are coming on very strong, and L.M. Ericsson expects their use to increase 100-fold over the next few years. Engineer Nils-Goran Engblom of Stockholm emphasizes that today there are even experts who say that it will soon be possible to lay such cables across the Atlantic. For the time being, optic-fiber cables--the one in Turku was delivered by Nokia, incidentally--are not exactly competitive, but they are in fact on the borderline.

L.M. Ericsson has delivered similar equipment to the Scandinavian countries and to Italy, Saudi Arabia, and Mexico, among others. With this new development, the firm and the Turku telephone company are again making history in the development of telecommunications in Finland: in 1978, an AXE digital exchange system went into operation in Turku, and it was the first in the world.

11798
CSO: 5500/2288

PTT RECEIVES PRIVATE FINANCING TO MAKE UP FOR LOST FUNDS

Paris LES ECHOS in French 2 Jun 82 p 6

[Article by Jacques Jublin: "Private Financing Companies to the Rescue of PTT"]

[Text] Louis Mexandeau can thank Robert Galley. When, toward the end of the 1970's, the former minister of PTT had the felicitous idea of creating private telecommunications financing companies to offset shortfalls in state funding of the PTT, little did he imagine he would one day be thus rendering yeoman's service to a socialist government. For, the PTT, recently relieved of some 2 billion francs by the Treasury because the state is short of funds (LES ECHOS of 25 May), has struck it rich. FINEXTEL [Financing Company for the expansion of Telecommunications], CODETEL [Company for the Development of Telecommunications], CREDITEL [Telecommunications Leasing Company], AGRITEL [expansion unknown], etc, will play the role of budgetary "refloaters."

Louis Mexandeau's ministry is prepared to authorize them to bring 3.3 billion francs of new capital into domestic telecommunications, while their intervention can actually be limited to 2 billion francs. A curious bit of high arithmetic: On the one hand, the state milks its PTT, which it perceives as a "cave of Ali Baba," of the latter's 6 billion francs of profits while that public service, on the other hand, turns to the private sector for the financing of its expenses.

The economy has its by-roads that will enable the PTT to not fall too short of its investment goals. The conclusion is there to be drawn! Initially, 27.2 billion francs were provided in the 1982 budget for the network, to connect more subscribers to it and to improve the quality of its services. Jacques Delors and Laurent Fabius having some time ago decided to relieve the postal service of 600 million francs and the telecommunications services of 1.5 billion francs in an effort to economize, the minister of PTT could no longer count on more than 25.5 billion francs. A gaping "hole" that could handicap economic recovery. And a serious threat to employment in certain regions, the western region to begin with.

A paradox at the very least and at the very moment when the government was asserting incessantly that the economy's resurgence had to be fueled by the investment-intensive high-technology industries, such as electronics, telecommunications and data processing.

And the solution it has brought forth is as clever as it is unorthodox. With the 3,3 billion francs of fresh capital to be provided by the private financing companies, the PTT will be in a position to spend 27 billion francs to install new lines and modernize equipment throughout the Hexagon. Its "net loss" will thus be, from a funding standpoint, only 200 million francs, which may even be absorbed through an increase in productivity. Currently, the PTT is advancing at an annual growth rate of 5 percent: Its "in-house" reserves should enable it to go beyond this.

This would be a good way to unburden the telecommunications enterprises of the unemployment problem, which has them concerned. They have not failed to express this concern, which they did yesterday, through the spokesmen for their employees' union, SI 3 T, to Mr Louis Mexandeau.

The minister lent an understanding ear, saying: "It is necessary that we make known together and constantly the use that is being made of the public's money and how the PTT's investments are contributing positively to the government's policy as a whole." In a way, the state is appealing to the state for understanding, in that,the Ministry is an administrative agency, and the industrial firms it administers are public enterprises.

While the 1983 budgetary verdict is not yet known, the 1982 budget has been rescued thanks to the private sector. And without inflation, since the Audit Office itself has issued an opinion that the capital to be brought in by these companies would not cost any more than a new bond issue. The government will no longer be able to dig into these funds to plug up gaps elsewhere.

The PTT has warned: Telecommunications services will require annual investment rate of 27 billion francs a year over the next 5 years at least. For, subscribers are demanding more and more telecommunications network facilities; even those households already equipped with telephone service frequently want a second line. By 1986, 95 percent of all households are certain to be connected to the network, but then the phase of equipment renewal and of supplementary equipment will open up. This is borne out by all economic models.

9238
CSO 5500/2283

BRIEFS

FOURTH TV STATION IN 1983--The fourth TV station is to begin its transmissions in 1983 with the conversion of the present 819-line frequency (the first black and white station) to the 625-line standard. This conversion will involve some 40 transmitters and some 100 relay stations. Its object is to be able to serve 70 percent of the population between now and 5 years hence, particularly all cities of over 50,000 inhabitants. This information has been released by the minister of PTT, Mr Louis Mexandeau. Georges Fillioud, for his part, made a point of emphasizing yesterday to the Senate that the viewers with TV sets that operate only on 819 lines will be indemnified by the government inasmuch as they will be deprived of TV service by this conversion. According to government figures there are no more than 30,000 sets of this type throughout the Hexagon. The government's decision puts an end to a major controversy, in that, for some years now, some have advocated using the 819-line standard for a fourth private station. What will the nature of the new state station be? Cultural and educational. Georges Fillioud does not exclude the possibility that a portion of its program time will be allocated to public or private publish publishers, or even a mixture of them. Free or paid, the fee will be one of the major topics for discussion by the Interministerial Committee, which is to meet on Monday to take up the dossier of the fourth TV station in depth. [Text] [Paris LES ECHOS in French 11 Jun 82 p 4] 9238

THOMSON-CSF IN SAUDI ARABIA--By decision taken at a big international meeting, Thomson-CSF has been selected to build the MEDARABTEL [expansion unknown] microwave network that is to provide telephone, television and telex facilities linking Saudi Arabia, the Yemen Arab Republic, the People's Democratic Republic of Yemen, the Republic of Djibouti, and Somalia. The project, the cost of which will total (U.S.) $18 million, is being financed by the FADES [Arab Economic and Social Development Fund]. The MEDARABTEL network will be built by Thomson-CSF under a turn-key contract, with the participation of the Italian Telettra firm. The new Thomson-CSF microwave equipment (960 telephone channels plus 1 TV channel) will be powered by solar energy at many of its stations. Thomson-CSF will also participate in the training of the network's operating personnel. [Text] [Paris LES ECHOS in French 7 Jun 82 p 6] 9238

BROADCASTING STATION IN CARIBBEAN--The SOFIRAD [Radio Broadcast Financing Company] has taken control of RADIO CARAIBES INTERNATIONAL [RCI], a privately owned station that broadcasts to the Antilles from Sainte-Luce, it was learned early this week. Created in 1961, this "peripheral" station was broadcasting to Martinique and Guadeloupe and some English-speaking islands (Saint Vincent, Barbados, etc) 18 hours of programming daily. SOFIRAD, a private company that manages state participations in French and foreign audiovisual enterprises, has bought the majority participation in RCI that was held by two French advertising agencies. The new president and general manager of RCI is Mr Jacques Machurot, assistant general manager of SOFIRAD, who is also the administrator of EUROPE 1 IMAGES ET SON. [Text] [Paris LES ECHOS in French 9 Jun 82 p 10] 9238

CSO: 5500/2283 END

JPRS 81582

19 August 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 234

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 81582

19 August 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 234

CONTENTS

ASIA

PEOPLE'S REPUBLIC OF CHINA

Efforts Made To Modernize Satellite, Telephone Systems (Genevieve Van Gaver; REVUE FRANCAISE DE TELECOMMUNICATIONS, Apr 82) 1

EAST EUROPE

BULGARIA

Communications Ministry Collegium Reviews Problems (Yordan Popov; IMPULS, 29 Jun 82) 8

New Telex System Described (Margarita Petkova; IMPULS, 13 Jul 82) 10

Paper Reacts to 'Trud' Criticism on Poor Telecommunications (Lyuba Anachkova, et al.; IMPULS, 29 Jun 82) 13

Problems in Installation, Maintenance of Telephone Lines (IMPULS, 6 Jul 82) 17

New Television Transmitter Commissioned in April 1982 (Elka Nikolova; IMPULS, 29 Jun 82) 19

Biographical Data on Ministry of Communications Official (IMPULS, 6 Jul 82) 21

NEAR EAST AND NORTH AFRICA

EGYPT

Microwave Network for Sinai
(AL-AHRAM, 7 Jul 82) 23

SUDAN

Briefs

Telecommunications Project 24

SUB-SAHARAN AFRICA

ANGOLA

Briefs

Kuando-Kubango Automatic Telephones 25

WEST EUROPE

DENMARK/GREENLAND

Sixth Earth Station Approved for INUKSAT Net in 1984
(Peder; GRONLANDSPOSTEN, 14 Jul 82) 26

FINLAND

Largest Cities To Get DX100 Digital Phone Exchanges by 1987
(HELSINGIN SANOMAT, 30 Jun 82) 28

FRANCE

Briefs

Morocco-CIT Alcatel Contract 29
Thomson Telephone Lines in Mideast 29
Equipment for Telecom-1 29
Aerospace Cooperation With Indonesians 29
Telephone Technology Transfer 30

NORWAY

Telecommunications Agency Director Discusses Trends, Plans
(AFTENPOSTEN, 18 Jun 82) 31

Country's First Cable Television Soon To Start in Oslo
(DAGBLADET, 6 Jul 82) 34

EFFORTS MADE TO MODERNIZE SATELLITE, TELEPHONE SYSTEMS

Paris REVUE FRANCAISE DE TELECOMMUNICATIONS in French Apr 82 pp 26-33

[Article by Genevieve Van Gaver: "The Chinese Challenge"]

> [Text] For the Chinese, all the problems posed are subordinate to the great question of how they can get their immense country (9.56 million km^2--18 times the size of France), which will have a population of 1.23 billion at the end of the 20th century, to the industrial stage as quickly as possible.
>
> Obviously, telecommunications can help China win this battle. And despite certain difficulties and disappointments, the French manufacturers still stand a very good chance of cooperating with China in setting up a modern telephone network--if they can show tenacity.

Geographically, distribution is very unequal: the telephone is found essentially in the cities. The number of lines is estimated at 20,000 per million inhabitants in the urban milieu--i.e., 2 lines per 100 inhabitants--and the traffic is mainly intraurban. If one compares the telephone density of the cities with the figure for their population (150 million), one notes that 20 percent of the Chinese use 3 million lines, and there are only 1.18 million lines for 750 or 850 million persons. Telephone usage, however, is far less intensive than in the developed countries.

The reasons for this underdevelopment are diverse. The one most often cited is that extension and modernization of the network have not been considered priority tasks; the Ministry of PT [Posts and Telecommunications] therefore was not an important one and consequently had few credits at its disposal, in contrast with the Fourth Ministry (Machine Building), which, for its part, came under the Military Affairs Commission. Furthermore, no mention was made of telecommunications in the 5-year plans. Moreover, under Mao the country was trying mainly to develop heavy industry and carried out a policy of big works projects.

It seems that the present governors have a different approach to the problem. Starting in 1981, China has reoriented its economy and admits that errors had been made in the last 30 years. On the occasion of his visit to Brussels for the EEC-China events in March 1981, Mr Gumu, vice prime minister and chairman of the big import-export corporation and the foreign-investment corporation, stressed for the first time the necessity of modernizing telecommunications.

Emphasis is currently being placed on development of the network of certain coastal provinces, zones and cities. The present policy further grants a portion of autonomy to the enterprises, manifested by the possibility of planning their activities themselves, having the use of a part of their funds, and managing their stocks.

China has not, of course, considered it advisable until now to develop telecommunications, but the situation is evolving. Because of limited financial means, it has been decided not to do any ineffective "sprinkling" but rather to concentrate the telecommunications facilities to the maximum in several poles of development chosen for opening up to the outside: the provinces of Quangdong and Fiujian, and more particularly, the special economic zones of Shenzhen, Zhuhai, Shantou and Xiamen. If the experience is successful, they will serve as an example and, by means of their exporting industries, will furnish the foreign exchange that will make it possible to pull the rest of the country onto the road of modernization.

At present, there are few reliable statistics available on telecommunications in China. Nonetheless, the configuration and capacity of various networks is known.

The Telephone in China

In recent years, the most important achievement in the area of the telephone has been the placing in service, on the national level, of two modern systems for long-distance communication, one using radio relays and the other, coaxial cables.

Twenty-six provincial capitals are linked to Peking by radio beams, especially for transmission of television programs and press facsimile. A few radio links are used for telephony; thus, the Peking long-distance central telephone exchange, which also serves as an international transit center, has a 60-channel link and another one with 600 channels.

According to the official Chinese sources, the radio-beam network is estimated at 500,000 circuit-kilometers and the underground-cable network at 1.8 million circuit-kilometers; but an extension of the radio-beam network (or a domestic satellite program) is envisioned for linking Peking with the isolated and sparsely populated regions of the north and west of the country.

In the northeast of China, there is a coaxial-cable system of 1,700 kilometers, which has 1,800 channels and backs up certain radio links. It is deployed in only eight provinces and links Peking with Tianjin, Jinan, Shanghai and Hangzhou. There is also a 180-channel underwater coaxial cable between Tianjin and Dalian (formerly Port Arthur).

In toto, the interurban network has 22,000 circuits, 2,300 of which are automatic and semiautomatic.

Essentially, the traffic is switched manually, but a few links from Peking are automated or semiautomated.

Automation is under way. There is even talk of the possibility of the users in the provinces linked by coaxial cable being able to dial a number directly and reach it in 10 seconds.

In 1980, there were 210 million communications on the long-distance lines.

In the big cities, there are about 3,000 local self-switching installations of 1,000 to 1,500 lines each.

It should be noted that the urban telephone lines, though optimized, are heavily overloaded.

As regards the telegraph, it is little-developed in the interior of the country because of the difficulties raised by Chinese writing, which makes it necessary to use a code system. For traffic with the outside, the English language is used. The network is composed of 9,100 circuits.

To facilitate the expansion of contacts with foreign countries, the international communications capacities have been strongly improved since the beginning of of the 1970's. In 1980, the international traffic was 1.73 million telegrams (as compared with 146 million messages sent inside the country in the same year); and telephone communications totaled 13 billion minutes. The country has 300 telegraph circuits and 200 telephone circuits, by either satellite, cable or radio.

China is linked directly to 31 countries and has interconnections with the rest of the world except for South Korea, Israel and South Africa.

Since 1972, the People's Republic of China has communicated with the outside via Intelsat. Three standard-A ground stations, two of which are situated near Peking and one near Shanghai, work through satellites of both the Pacific Ocean and the Indian Ocean.

An underground coaxial cable 180 km long and linking Guangdong with Hong Kong has been in service since 1974. It provides 300 high-quality 2-channel circuits, usable for telegraph, telephone, telex, data and facsimile transmission.

An underwater cable links Nan Hui, in the Shanghai region, with Kyushu in southern Japan.

According to official Chinese sources, telex exists in 14 cities of China. In 1979, it became automatic from Peking. There are nearly 1,000 subscribers at present.

As regards production, Chinese policy consists mainly in "counting on its own forces" and manufacturing as much as possible at home (see section below). Nevertheless, since they cannot produce sophisticated equipment yet, the Chinese have to resolve to bring it in from foreign countries.

International Relations

The telecommunications materiel imported in recent years has consisted almost solely of satellite-communications equipment from the United States, communications systems for navigation and air-traffic control (from France and Great Britain), and line-operating equipment (from Japan, because it laid underwater coaxial cable). Japan and the FRG have also furnished a wide range of equipment, generally in small lots--for example, 114 private switching installations imported from Japan between 1973 and 1975. These small quantities lead one to think that the Chinese consider them as samples or prototypes and are using them in the priority sectors. When demand has grown sufficiently and more are needed, the Chinese will set to making them themselves.

It would seem that China has decided to apply to the United States to set up its national network for remote broadcasting via satellite, which would comprise 1,000 or 2,000 ground receiving stations; when the project was initiated, 60,000 receiving stations were planned, but there has been a "readjustment." Furthermore, NASA has reserved spaces for these Chinese remote-broadcasting satellites on two flights of the space shuttle. But it will probably take another 3 or 4 years for the network to be set up.

To the extent that China's foreign trade deeps on developing, it is obvious that the rate at which international circuits are placed in service between China and foreign countries proceeds is destined to grow rapidly; the two circuits installed between China and the United States in September 1978 had already risen to 10 by the end of 1979!

The Chinese leaders are aware of their lag. Large sums have been spent in the last few years to improve the national network and communications with the outside. But the radio-beam and coaxial-cable networks still do not cover the entire country. And even so, it will be necessary, in order to make full use of the potential of these circuits, to continue equipping them with modern modulation, multiplexing and switching materiel: it is improbable that the Chinese would have set up such technically advanced transmission arteries if they were planning to make use of only a small part of their capacity.

Relations Between Administrations

Chinese telecommunications come under the Ministry of Posts and Telecommunications, with which the French administration maintains close and particularly friendly relations. They began in 1971 on the occasion of the visit to France of Mr Zhong Fuxiang, then general director of telecommunications, and later minister, until September 1978. This first contact was followed by many exchanges, the most notable of which were conducted at the level of the ministers and the general directors. These events, in which the French manufacturers of telecommunications equipment took an extensive part, enabled the Chinese PT to acquire good knowledge of our potential in this area. Their attention was attracted by our experience of rapid development and by our efforts to catch up on the lag in our telephone network: China was confronted with similar problems, intensified by the size of the country.

Thanks to these regular contacts, a climate of confidence is established between the two administrations--a decisive factor for succeeding in China. Furthermore, our credibility was increased by the complete success of the Transpac demonstration in Peking in July 1979. The Chinese demonstrated their confidence in us by signing a protocol of cooperation on 4 October 1979--the only agreement signed with a foreign PT ministry.

The French Ministry of Posts and Telecommunications also maintains relations with the Fourth Ministry. A convention of cooperation has been signed through the intermediary of the National Center for Telecommunications Studies (CNET), on the one hand, and on the other, the Chinese corporation for importation of electronic materiel; the object of this agreement is the creation of a center for research on the reliability and environmental testing of electronic devices in China.

This Fourth Ministry--a very powerful organism that controls 3,000 plants and many research centers--has financial means that are not available to the Ministry of PT: its functions are considered to have priority over those in telecommunications, since it comes under the Military Affairs Commission. Thus it was able, in 1981, to sign contracts with the French companies SEMS [expansion unknown], SAGEM [Company for General Application of Electricity and Mechanics] and Logabax, within the framework of an agreement, signed on 6 December 1978, on industrial cooperation in computer technology and electronics. At the present time, apart from a few limited transactions, the French industry has not been any more successful than others in establishing a position in the Chinese market.

Readjustment and New Policy

But the basic facts governing our trade relations with China were considerably modified as of August 1979, at which time the so-called "economic readjustment" policy was made official and intensified. From that time on, the Chinese PT had to procure for itself the means for financing its plants and equipment by establishing a balance between imports and exports within the ministry itself; cooperation with foreign countries therefore had to be in the form of strict compensation, which seemed particularly difficult in the area of telecommunications.

The blow was all the harder in that it came after the hopes of 1978, when each organism had magnificent modernization projects in mind. China did not realize at that time the immense difficulties with which it would be confronted: shortage of technicians, because of 10 years of Cultural Revolution, and also the insufficiency of financial means. Whence the decision on economic readjustment, recently extended to 1985.

In view of this situation, Franco-Chinese cooperation between the Directorate of Advanced Education in Telecommunications in France and the Institute of PT in Peking, signed [as published] in Paris on 13 November 1979, took concrete form mainly in the sector of education, by organizing teacher exchange and the receiving of Chinese students in the National Higher School of Telecommunications (ENST). The French administration is continuing its efforts by the sending of experts and the receiving of trainees, mainly in the area of data transmission as well as the planning and management of telecommunications networks.

Will the First Be the Last?

Paradoxically, the fact that France developed its relations with the Chinese PT earlier than other Western countries, notably the United States, elicits a feeling of disappointment and bitterness among most of the French builders today. After receiving delegations, sending missions, taking part in expositions, and working up and writing proposals for several years, they figure that they have put out quite a bit of effort for very meager results. But this is the hard law of negotiations with China as it is in our day: in the recent past, it has sometimes taken 6 years of talks to sign a contract.

But this disenchantment, which is entirely understandable, unhappily comes at a moment when efforts should be redoubled, because China is really beginning to open outward and the competition there is more lively than ever. The Japanese in particular put on constant pressure, not hesitating to invest widely in the leasing or purchase of offices, in sales at a loss, in advantageous or even interest-free and very long-term loans, and not at all discouraged by the fact that they have concluded only one deal in switching equipment in 2 years: the sale of a Fetex 150 by Fujitsu to the PT of Fushun. During the same 2 years, Sweden managed to sell a single temporal Axe, made by Ericsson, to the city of Peking.

France has one trump card: by the signing of our protocol, the Chinese PT has committed itself to cooperating with us in the areas that they have chosen. It is up to us to be equal to the task.

Telecommunications, and switching in particular, are going to develop in the first place in the two southeast provinces of Guangdong and Fujian, then in the cities of Peking and Shanghai, where international communications have priority. The fact that the purchases are beginning in these two provinces, which are special economic zones and enjoy broad autonomy vis-a-vis Peking (in the telecommunications sector too) is a heavy handicap for the French exporters. The Peking ministry, which is favorable to France, does not get to put in its word when the administrations of those two provinces decide on purchases abroad, provided that the technical guidelines set by the ministry are adhered to. We also had experience of this on the occasion of the purchase of the Fushun center. Peking gives us its support by keeping us informed of the purchases being considered by these two provinces; but because of the proximity of Hong Kong, bonds of kinship, and interest linked to those of the colony, the PT of Guangdon is already heavily committed to Cable & Wireless for their various projects in progress. It will therefore be difficult to get into the picture in that region.

The same is not the case in Shanghai, where the French industry still has all its chances; the PT administration of that municipality still remains under the oversight of Peking, as do the administrations of the other provinces. Out of a concern for uniformization and standardization, the interior of the country, when it modernizes in turn, will be led to follow the options decided on by the coastal cities. It is therefore of the first importance to succeed in Shanghai.

The situation is clear: one either decides to lose all the investments made in recent years and stop the expenditures, or else one decides to do everything necessary to win the game. The time has come for those responsible to make their choice. Half-measures are not worth anything; this is a decisive moment for the future. Those who are unaware of this fact and who are not interested in China today take the heavy responsibility of finding themselves isolated from a country whose population is going to increase by another 230 million in 20 years and that will have to be reckoned with more and more every day.

Ministry of PT: 11 Vice Ministers

Telecommunications come for the most part under the Ministry of Posts and Telecommunications; but certain other ministries, such as National Defense, Foreign Affairs, Water Conservancy and Power have their own networks. The Fourth Ministry of Machine Building, which is responsible for electronics and computer technology, has a network independent of that of the PT. This fact causes some difficulties and a certain anarachy; thus the PT is currently trying to obtain control of the private networks to increase its importance and organize the utilization of equipment more rationally.

The minister of PT is assisted by 11 vice ministers.

The ministry is composed of nine departments (posts, telecommunications, personnel, education, science and technology, planning and finance, external affairs, industry, materiel) and two national companies--China National P and T Sciences and Technics Corporation (which comes under the department of sciences and technology), and China National P and T Industrial Corporation (which comes under the department of industry).

At the end of 1980, the Chinese PT employed 820,000 persons, divided equally between posts and telecommunications. Furthermore, each province, municipality and autonomous region has its own administration (a total of 31).

The telecommunications industry has 152 production units; 29 of them come directly under the Ministry of PT and represent 80 percent of total production, and the others are subordinated to the provincial authorities (in Shanghai, for example, there are seven plants or shops). Some of the equipment used is produced by the Fourth Ministry of Machine Building.

Research: 4,000 Engineers and Technicians

Research employs nearly 4,000 engineers and technicians, divided among the PT scientific-research academis of Peking and Wuhan, in the Data-Transmission Scientific-Research Group of Peking, as well as in 41 national institutes.

Nearly all the provinces have their own research and development institutes.

Training is done in four higher PT institutes (Peking, Nanjing, Changchun and Xian), which have 4,500 students, and 31 secondary schools (10,800 students) at the provincial and municipality levels and 55 technical schools (4,900 students).

11267
CSO: 5500/2298

COMMUNICATIONS MINISTRY COLLEGIUM REVIEWS PROBLEMS

Sofia IMPULS in Bulgarian 29 Jun 82 p 1

[Article by Yordan Popov: "In the Collegium of the Ministry"]

[Text] A session of the collegium of the ministry, led by Minister Pando Vanchev, was held on 25 June. The following questions were taken up: measures for accelerated introduction of the achievements of scientific and technical progress into the sector during the Eighth Five-Year Plan; the technical state of the communications system and the quality of services in 1981; the collegium's work plan for the second half of the present year.

The trend in the development of communications worldwide is conversion to new equipment and technologies in the area of space communications, microelectronics and optoelectronics. The development of our communications system during the Eighth Five-Year Plan will proceed in the spirit of scientific and technical progress. There will be an increase in telephone density, in the automation of telephone communications, the number of interconurbation cables, the construction of international dial telephone and telegraph exchanges, the number of new radio transmitters and retransmitters, the equipment and systems for the mechanization and automation of postal process, the introduction of new technologies etc.

The collegium heard information about the technical status of the communications system and the quality of services last year. The achievements and shortcomings that were found in the work were pointed out.

Serious attention was directed to the necessity for all communications agencies to pay greater attention to the technical serviceability and proper use of departmental equipment in the spirit of the Communications Law.

The collegium's work plan for the second half of the year was discussed. It integrates the tasks springing from the decisions of the 12th Party Congress, the Ninth BCP Congress, the 14th DKMS [Dimitrov Communist Youth Union] Congress and the urgent problems which the collectives of the system must solve. Better coordination of coomon tasks with other ministries, ONS [okrug people's councils], the TsKPS [Central Committee of Trade Unions] and UPK [institution's trade-union committees] is envisaged in order to render more effective assistance in the fulfillment of this year's counterplans. Bulletins of certain OUS [expansion unknown; possibly okruzhno upravlenie na suobshteniyata, okrug communications administration] directors regarding the fulfillment of urgent okrug-scale tasks are planned.

The collegium took decisions as required on the questions discussed.

6474
CSO: 5500/3014

NEW TELEX SYSTEM DESCRIBED

Sofia IMPULS in Bulgarian 13 Jul 82 pp 1, 3

[Article by Engr Margarita Petkova: "The Future in Our Day"]

[Text] The building of the International Electronic Automatic Telegraph Exchange is in its concluding phase--comprehensive functional tests are being conducted, traffic programs are being inputted and tried out, and the final adaptation of the exchange to the world telex network and the checking of telegraph links to all countries of the world are being carried out.

The International Automatic Telegraph Exchange was produced by the Swedish firm--Ericsson, and was installed and tested under the guidance of Swedish specialists. With its commissioning the establishment of electronic telex communications in our country was initiated.

The exchange is an absolutely complete specialized real-time computer complex. It is controlled by powerful processors, which makes possible the satisfaction of capacity needs in the telex network for several decades to come and the introduction of a large number of new modern telex services for subscribers, as well as the entire takeover by the exchange at a modern level of billing for telex calls, sharp improvement in the quality of operations in the telegraph network and a guarantee of optimum use of communication links with the most efficient maintenance.

The new international telegraph exchange will make possible speedy and high-quality telex communications with all countries in the world, completely automatically or with the help of modern operator's positions in the International Telex Switchboard.

Services will be substantially improved in the national telex network, too. Telex subscribers from Sofia and from Blagoevgrad, Pernik, Kyustendil, Vidin, Vratsa, Lovech, Pleven and Mikhaylovgrad okrugs will go over to keyboard selection. The date and hour of the establishment of communication will be printed on their teletype machines. At the request of the subscriber it will be possible to obtain duration and charge information after a call is over and an itemized bill at the end of the month for every call that was made.

The exchange makes it possible to set up departmental telegraph networks, i.e. subscriber groups operating only among themselves within the group. This assures the most efficient use of the switching and relay equipment of the Ministry of Communications for the needs of the other departments.

The use of remote-controlled multiplexers leading to the exchange and of digital relay systems will make possible in the future the economical establishment of the country's telegraph network and its centralized monitoring and maintenance.

The subscriber services which the exchange supplies offer innovations and great convenience: conference systems, storage and retransmission of messages, automatic duration and charge information for a call, abbreviated selection, direct callup, automatic rerouting of calls, automatic recalling, automatic information messages, closed subscriber groups.

The possibility of switching messages through the exchange, i.e. storing and retransmitting them, is provided. If the called number is busy, the subscriber can feed a telex message into the exchange and switch off. The exchange transmits the message to the desired correspondent once he becomes free and informs the calling subscriber.

In the event of intensive operation with a certain number of correspondents, the subscriber may use the abbreviated selection service, i.e., work with abbreviated addresses prestored in the exchange.

If a given subscriber has a single correspondent, he may use the direct calling service. In this case selection of the number is eliminated altogether and the exchange makes the connection at once when the call-button is pressed.

All calls intended for a given subscriber can be automatically rerouted to another number specified by him.

If a subscriber does not desire to accept messages addressed to him but is anxious to inform anybody who dials him of some text, he can use automatic information messages.

Instead of losing time redialing a busy correspondent, a subscriber can use the automatic recalling service. The exchange makes an automatic series of attempts to establish the desired connection.

The multiple-address (conference) systems, whereby one subscriber can transmit his messages simultaneously to a great number of correspondents, are a great advantage.

The International Automatic Telegraph Exchange makes possible centralized billing for the calls which pass through it. Data for every call made are recorded on magnetic disk devices and processed by processors in the billing system. At the end of the month bills are printed out for subscribers from Sofia and the country, as are also data for planning the telegraph traffic between the Ministry of Communications and the communications administrations of other countries, as well as diverse statistical traffic data necessary for optimum planning and development.

The exchange will be operated by highly skilled specialists. With monitoring, diagnostic and functional capabilities programmed into it, servicing is concentrated in a special operations room and is effected mainly with the help of a special command language by input-output devices connected to the exchange.

6474
CSO: 5500/3015

PAPER REACTS TO 'TRUD' CRITICISM ON POOR TELECOMMUNICATIONS

Sofia IMPULS in Bulgarian 29 Jun 82 pp 1, 3

[Article by Lyuba Anachkova based on materials from specialists Engr Tsako Runev, Engr Liliya Paskaleva, Engr Stoycho Stoykov and Kiril Iliev: "When Does Criticism Help?"; TRUD's critical remarks were published in JPRS Report No81315, 20 July 1982]

[Text] Asen Petrov Georgiev's reportage, headlined "Telephone? It's Not Very Simple," was published in issue No. 127 of 2 June 1982 of the newspaper TRUD.

We hasten to agree with this headline though we might preface it, "To write about."

The report criticizes the quality of telephone communications, the ratio between the number of available telephone stations and the traffic capacity of the equipment, interconurbation and interokrug dialing, the differences between okrugs in respect of telephone density, the type of exchange now in operation, standards for telephone equipment out of order, percentage of calls completed, and even solicitude over improvement of the supply of telephone equipment in the capital. Generally speaking, the policy of the Ministry of Communications is audited and the result is a negative sign. To what extent is all this justified?

True, there is a certain disproportion between the number of available telephone stations in the conurbations and the traffic capacity of the conurbation network. And this is quite natural for telephone communication is established in conurbations according to the capacity of their exchanges, the equipment being produced by the Bulgarian communications industry. Interconurbation dialing is effected on two levels--intraokrug automation and automation between okrug cities with expensive equipment, procured with foreign exchange from the second direction, being used for the purpose.

The ministry's 5-year program targets the construction of 500,000 new telephone stations. This is the goal set by the 12th Party Congress. Simultaneously with this construction, the relay network will be built and expanded significantly. At the last session of the collegium Minister Pando Vanchev gave instructions in addition along these lines and decisions were taken as required. The implementation of these will lead to a decrease in this undesirable disproportion.

It is an indisputable fact, however, that both telephone density and coverage for the country as a whole have tripled. The inference that this was done in the pursuit of revenues is thoroughly erroneous for the needs of the national economy and the population have grown incredibly. The author should get it straight that the Ministry of Communications has more to gain from developing the interconurbation network. This way more calls would be made, whereas a telephone station constructed in village "X" costs a great deal and takes the owner 15 to 20 years to pay for. But apart from the quest for revenues, which is not in the slightest at variance with the new economic mechanism, there is also a social program, which the author and his editor seem deliberately to have disregarded.

The "Mladost" and "Lyulin" wards in the capital are not at all "victims" of this disproportion. The new dial telephone exchanges are being built as a package, which means that the project estimates for them include all construction and installation work not only for the construction of the exchanges themselves, but also for the coupling cables and the subscriber network. All the connecting circuits with other capital exchanges, provided for in the project estimates on the basic of traffic data, would be actuated as early as they themselves are put into operation (the dial telephone exchanges in the wards in question). The observations made by specialists show that these communications are sufficient for the telephone traffic. We must, however, admit that there are still not enough circuits to conurbations in Sofia Okrug. At the moment a work project with a startup target date of 30 December 1983 is being carried out which will eliminate this anomaly.

There is the necessary number of connecting links from and to ATTs-67 (Dragalevtsi). There is an insufficient number of telephone stations there (200), but a new ATTs is being installed, which not only will increase the number thereof 10-fold, but will markedly improve the quality of telephone service.

How do matters stand with the facts, cited in the report, bearing on telephone communications in Blagoevgrad and Kurdzhali okrugs?

The Blagoevgrad OUS [expansion unknown; possibly okruzhno upravlenie na suobshteniya, okrug communications administration] director, Engr K. Georgiev, tells us that the data in question were already published once in issue No. 40 of the newspaper IMPULS on 6 October 1981. Since then, things naturally have changed. The stretch of cable from Blagoevgrad to Simitli has long since been rebalanced; 60 new channels have been put into operation over it, thus eliminating the "bottlenecks" of the relay system in the Sandanski-Petrich routing. The problem of a single-cable trunk in the Gotse Delchev-Razlog routing has been partially solved. Parts of it have been doubled and an additional 24-cable line has been created, but complete solution of the problem will not be obtained until the end of the five-year plan.

Favorable changes have also taken place in the above-cited conurbations of Kurdzhali Okrug. As for the decrease in the average use of dial telephone communications, the reason should at least be sought in the number of connecting circuits. It has its roots mainly in the incorrect conception of some economic managers of enterprises, who place restrictions on the telephone traffic from their PBX's, crippling their communications equipment for the sake of economy.

The assertion that the use of interconurbation telephone communications (manual system of operation) is low both country wide and also for Blagoevgrad Okrug is incorrect. The average load per interconurbation telephone link (manual system) per 24-hour period nationwide is about 200 tariff-minutes, whereas international recommendations permit up to 150. The inversely proportional ratio between the indicators for the use of links and the time for completion of calls must be emphasized.

It is practically impossible within the limits of a reply to analyze the facts illustrated by the figures--no longer timely--from Blagoevgrad Okrug. Moreover, it is erroneous to criticize the ministry's endeavor to increase telephone density. There will be a difference between individual okrugs because the development of telephone communications in them depends on whether there are large industrial facilities, health resort complexes and cultural centers, i.e. on our regional economy.

A legitimate question is: "Did 1929-model exchanges have to be introduced at such a rate?" But where was another to be got when our communications industry produces only this one? The failure to master the ESK 1000 E Crosspoint type license is likewise a problem of the Ministry of Machine Building and Electronics.

For information only: an imported electronic-type of conurbation exchange for 10,000 stations costs about 20 million foreign-exchange leva.

One can, and correctly, write about "Quality--at Some Future Indefinite Time." In the case of telephone services, it is still not at the desired level and the ministry is making, and will continue to make, capital investment to improve it. However, as regards standards for faults and their interpretation in this report, we must emphasize that the interpretation not only lacks verisimilitude, it is also insulting to the specialists. The 3000 faults per 20,000 stations in one okrug are not attributable to every single day, as the author incompetently alleges ("constantly out of order"), but to the 90 days of a quarter, i.e. 33 faults per 20,000 stations in 24 hours, which is 0.16 percent.

In this conglomerate of problems there is another that merits our attention. World statistics show that in countries with the most developed establishment of telephone services only 60 out of 100 calls are completed. In Sofia this figure is 42, and not 35 percent. The trend is towards an increase, which was called in question in the pages of the newspaper. The inference that the blame lies solely with the equipment and maintenance personnel is also inaccurate. Very often the called party is absent, which appreciably lowers this percentage.

During the Eighth Five-Year Plan the Ministry of Communications will direct its efforts towards the following in order to improve quality:

1. On the basis of observation and measurement of telephone traffic, the traffic capacity of conurbation and interconurbation dial telephone exchanges, main trunks and intraokrug automation will be increased.

2. There will be an increase in the checking on the communications equipment obtained from our industry, as well as on the quality of projects handed over by the construction organization for operation.

3. New instructions and prescriptive documents are being updated and formulated regarding the maintenance and use of communications equipment as a result of the introduction of new instrumentation for the automatic testing and monitoring of equipment at dial telephone exchanges.

4. "Bottlenecks" in the technology and maintenance of telephone communications have been detected and card-indexed. In solving them, Bulgaria's advanced experience and that of other countries will be employed.

6474
CSO: 5500/3014

BULGARIA

PROBLEMS IN INSTALLATION, MAINTENANCE OF TELEPHONE LINES

Sofia IMPULS in Bulgarian 6 Jul 82 p 3

[Article: "Conurbation Telephone Communications—Problems, Suggestions"]

[Text] The construction of conurbation telephone networks has lagged significantly behind the growth in the capacity of dial telephone exchanges. Thus, at the moment there are nearly 10,000 numbers not taken in Ruse Okrug because the conurbation network needed for this purpose does not exist. This results in inefficient utilization of fixed production assets, growth in the amount of allowances for depreciation and an increase in the burden of costs, which adversely affects the fulfillment of the basic economic indicators. The reasons are most diverse. The construction of the large cable networks to ATTs [dial telephone exchange]-3 and ATTs-5 is being carried out by Isstroy SMG [Construction and Installation Group], Ruse. The expansion of the network is already several years overdue and interest in a significant amount is being paid to the BNB [Bulgarian National Bank]. In practice this is how it happens: for crash fulfillment of their volume indicator the construction men lay great quantities of cable with great capacity and of great value, but they do not at the same time complete the installation work and these are not handed over for operation. For years in a row scarce cables lie buried in the ground without operating. Thus, for a project with a total value of 1,800,000 leva, so far in more than 3 years barely 739,000 leva, or 41.06 percent, has been taken down, while the startup target date has long since passed. Of the 730,000 leva that have been taken down, only 95,000 have been invested in equipment that has been put into operation. For this reason there is free capacity of 4000 numbers at ATTs-3. At the same time a number of projects are under construction in the okrug with internal forces and resources with the APK [agroindustrial complexes] and obshtina people's councils actively helping. Even though the situation here is a little better, the construction of dial telephone exchanges is running ahead of the development of the cable network, and in a number of conurbations of the okrug there are unissued numbers. Thus, in Koshov there is free capacity of 170 numbers, in Cherven 150, in Malko Vranovo 170, in Shtruklevo 100, in Bila 300 etc. The basic thing here continues to be—institute synchronized construction of the cable network and expansion of the dial telephone exchange.

The second basic problem is efficient maintenance of the conurbation telephone network. And on this score the lack of skilled manpower, and specifically cable splicers for the most part, is felt significantly. Even though the number thereof in the okrug exceeds 25, some have low qualifications and are used ineffectively, and the rest are qualified workers. The question of cable splicers' work clothes must perhaps be raised here--they should be suitable for the job and be warm and comfortable.

The problems in maintaining the conurbation telephone network in the okrug city are considerable. The dispatcher service that has been established registers faults and transmits them to GKM [expansion unknown; possibly glavno kontrolno myasto, main control point], and then begins the assignment among the repairmen, during which an hour or an hour and a half is lost, to say the least. Perhaps the right thing would be if a well-qualified chief dispatcher were appointed in the city cable system itself, who would assign jobs among the repairmen and mechanics and get feedback about what is done.

The reasons for the construction and maintenance of the conurbation telephone network are varied. It cannot be denied that in this regard there has been considerable progress, especially this year. A central construction staff has been established to coordinate the work between construction men and operations. Brigade members are regularly sent to help the construction men. More than 500 man-days helping the construction men have been worked; 4000 meters of coupling cable have been laid. A special program has been formulated for the development and introduction of the achievements of technical progress into communications during the Eighth Five-Year Plan. There is also considerable help from the okrug people's councils, the obshtina people's councils and the agroindustrial complexes.

The new economic mechanism and its application require a new approach to the construction and maintenance of conurbation telephone networks so that planned indicators can be rhythmically fulfilled.

6474
CSO: 5500/3014

NEW TELEVISION TRANSMITTER COMMISSIONED IN APRIL 1982

Sofia IMPULS in Bulgarian 29 Jun 82 p 3

[Article by Elka Nikolova: "For Us Millions of Viewers"]

[Text] There is no other invention that has so changed people's lives as radio and television. Communication via sounds and pictures brings the most remote countries and peoples closer together.

Television towers are the bridge by means of which every transmission takes place. But few people know that a new television transmitter for the first program has been functioning in the Sofia television tower since 26 April 1982. Produced by the Japanese firm NEC [Nippon Electric Company] in 1981, it is one of the most modern television installations in the world, twice as powerful as those previously in operation. It broadcasts the television program only for the capital and Sofia Okrug. There are places that the signal cannot reach directly. Relay stations which receive the signal from the tower and emit it on another channel have been built.

"The introduction of the transmitter was inevitable," says repairman Veselin Yosifov. "Picture quality requirements have risen with the new television sets. I believe that viewers are already satisfied."

A "small" detail--the apparatus was installed without a blueprint and without the participation of Japanese specialists. A brigade of engineers and repairmen under the leadership of Engr Lyubomir Iliev and Engr Nikola Peshev took the initiative. The job was accomplished and 15,000 foreign-exchange leva alone were saved.

Do the working conditions measure up to the deserts of the staff? Twenty-four hour duty is maintained here. The problem of air-conditioning the studio is unsolved. If the temperature outside is 14°, the thermometer inside shows 29°; on summer days it reaches 38 or 39°. The apparatus heats up and its qualities are lowered. It is hardly tolerable for the people either.

No such problem exists in the studio broadcasting the second television program. From the operator's position (noise- and heat-insulated) Engr Liliya Betsinska and Stoycho Stoychev effect video and audio control. The stereophonic ultrashort-wave program "Horizon" for Sofia City and Sofia Okrug is continuously heard from here.

In its entire activity the Radio Stations and Television SP [Economic Enterprise] is implementing a new trend—the combining of the achievements of scientific and technical progress with high quality of television transmissions, so that we millions of viewers might have pleasant minutes before the screen.

6474
CSO: 5500/3014

BIOGRAPHICAL DATA ON MINISTRY OF COMMUNICATIONS OFFICIAL

Sofia IMPULS in Bulgarian 6 Jul 82 p 1

[Text] On 25 June 1982 a session of the Ministry of Communications UPK [institution's trade union committee] was held. Present in addition to committee members were Vasil Vasilev, Transportation and Communications Section head in the BCP GK [City Committee], Manol Chobanov, secretary of the BCP Leninist Rayon Committee, and Sirma Georgieva, RK [Rayon Committee] instructor.

Because of his promotion to the post of deputy minister of communications, Engr Yanko Yanev was relieved as UPK secretary. His past service was highly prized by the BCP GK. The BCP RK awarded him a certificate of honor for his active party and political work.

Engr Valentin Atanasov Grozdanov, previously deputy secretary of the committee, was elected UPK secretary.

Valentin Grozdanov was born in 1932 in the village of Selanovtsi (Vratsa Okrug). He comes from a family of office workers.

In 1953 he was graduated from the Avram Stoyanov PIS [expansion unknown] and in 1964 from the Lenin VMEI [Higher Machine-Electrical Institute] as a specialist in radio, telegraph and telephone engineering.

From 1953 to 1956 he was a consultant in the Radio Administration of the Ministry of Posts, Telegraphs and Telephones. Subsequently he served consecutively in the Technical Directorate and in the Radio and Television Section of the Main Administration of Communications. From 1966 to 1976 he was chief specialist in the Radio Broadcasting and Radio Communications Section; from 1971 to 1976 he served as chief of the Radio Communications Section of the Radio and Television Administration in the ministry. And since 1976 he has been chief radio broadcasting specialist in Operation and Maintenance of Radio and Television Systems.

He has been a BCP member since 1964. In the ministry he has been member and chairman of the institution's trade union committee, and since 1972 deputy secretary of the institution's party committee and chairman of the institution's commission for people's control.

He is chairman of the Bulgarian Federation of Radio Amateurs.

The following governmental and departmental awards have been conferred upon him: Order of Labor--gold, Medal for Services to the Bulgarian People's Army, Medal for 25 Years of Civil Defense of the Bulgarian People's Republic, Medal for 30 Years in the Bulgarian People's Army, and the Sixth Five-Year Plan Medal. He has been an outstanding employee in the ministry and holds the Badge of the Central Council of Bulgarian Trade Unions for Contribution to Technical Progress. In addition he has the following anniversary medals: 30th Anniversary of the Socialist Revolution in Bulgaria, Centenary of Bulgaria's Liberation from Ottoman Bondage, 100 Years of Bulgarian Communications, and Bulgaria's 1300th Anniversary.

6474
CSO: 5500/3014

EGYPT

MICROWAVE NETWORK FOR SINAI

Cairo AL-AHRAM in Arabic 7 Jul 82 p 8

[Article: "Minister of Transport and Communications Announces New Microwave Stations in Sinai and Addition of Telephone Lines in al-'Arish and Rafah"]

[Text] Engineer Sulayman Mitwalli, minister of transport and communications announced that a survey of Sinai to determine the locations for building the new microwave stations has been completed. These stations will serve telephone communications in al-'Awjah, al-Hasanah, al-Qasimah, Bi'r Jafjafah in North Sinai, St Catherine, Fabran Valley, Bala'im, Abu Rudays, Abu Zanimah and Ra's Sadar.

Following the meeting he held yesterday to review operations on communications, roads and passenger services projects in Sinai, the minister added that 500 lines will be added to the present telephone exchange of al-'Arish. In addition, the new location for the al-'Arish exchange will be determined. An automatic exchange with a capacity of 240 lines has also been established in Rafah, and a small exchange with a capacity of 50 lines has been installed in al-Shaykh Zuwayd.

The minister said that a microwave connection has been executed in Sharm al-Shaykh and that it will make 24 communications circuits available between Sharm al-Shaykh, al-Tur and Cairo. He said that an automatic exchange with 240 lines has also been installed and that the telpohone commission will distribute the vacant lines there.

He said that in addition to the existing exchange of 100 lines, an automatic exchange of 240 lines will be installed in the city of al-Tur within 1 week, and telegraph communications will become available between Cairo, St Catherine and Dahab.

Engineer Ahmad Kamil, director of the Telecommunications Agency stated that a solicitation of bids has been announced for the construction of buildings and the installation of towers for the new microwave stations in north Sinai, in Rafah, Baluzah, Bir al-'Abd, al-Mazar, al-Qantarah, Ismailia and Ra's Gharib.

8592
CSO: 4504/394

BRIEFS

TELECOMMUNICATIONS PROJECT--International companies from Japan, the Netherlands, France and the FRG have agreed to contribute to a 9-year project to improve telecommunications in the Sudan. The cost of the program will be $850 million. SUNA reports that the government is currently contacting friendly states to seek financing for the project. [EA260056 Omdurman Domestic Service in Arabic 1700 GMT 25 Jul 82]

CSO: 5500/5014

BRIEFS

KUANDO-KUBANGO AUTOMATIC TELEPHONES--The arrival in Menongue of a team of Angolan and Japanese technicians is awaited shortly to install an automatic telephone and telex network. It should be noted that this province has been registering various difficulties in this field, caused partly by the shortage of qualified personnel, transportation means and equipment, as well as by constant blackouts and by a lack of interest on the part of the central administrative organs in this sector. For instance, the lack of transportation has caused long delays in mail receipts. [Text] [Luanda JORNAL DE ANGOLA in Portuguese 29 Jul 82 p 3]

CSO: 5500/5884

SIXTH EARTH STATION APPROVED FOR INUKSAT NET IN 1984

Godthaab GRONLANDSPOSTEN in Danish 14 Jul 82 p 21

[Article by Peder: "Ammassalik Into INUKSAT in 1984"]

> [Text] Earth station for satellite telephone will give many advantages and substantially increased capacity.

Telephone subscribers in Ammassalik will have better quality in their conversations with the rest of the country, and there will also be capacity for installing more telephones in the town, when a new INUKSAT earth station is placed in service near the start of 1984. The Folketing Finance Committee has just given the green light for Ammassalik to be connected to the tele-satellite system INUKSAT.

Previously Ammassalik has been connected to the telephone system with the rest of the country via the American military DEW line across the inland ice.

The quality of that connection is not, however, entirely satisfactory, and the system does not have the capacity to accomodate all those who desire to have telephones in Ammassalik.

Will Be Leased

The new earth station which will be placed at Ammassalik will not be purchased, but will be leased under a special leasing system, which means that with the rental amount Greenland's Telecommunication Administration is "buying" security, so that the system is continuously maintained and given the necessary service and inspections.

The amount of rent for the station will be 2.8 million kroner per year, but the amount now being paid for the DEW line connection will be subtracted from that.

Accordingly the annual expense will be reduced to 1.6 million, and that amount is expected to be fully covered by savings with the new system and an expected increase in income due to the increased number of conversations which can go between Ammassalik and the rest of the country via INUKSAT.

Station Number 6

The INUKSAT station at Ammassalik will be the sixth of its kind in the country.

At the moment there are four stations in use: Upernavik, Illoqqortoormiut, Aasiaat and Nuuk. Number five is expected to be placed in service at Qaanaaq at the start of 1983.

At the start of 1982 there were 195 telephone subscribers in Ammassalik. A substantial increase in that number is expected in the next couple of years, and this increase can not be handled by the DEW line connection alone, according to the Greenland Telecommunication Administration.

9287
CSO: 5500/2313

LARGEST CITIES TO GET DX100 DIGITAL PHONE EXCHANGES BY 1987

Helsinki HELSINGIN SANOMAT in Finnish 30 Jun 82 p 12

[Article: "Telephone Traffic to be More Reliable: Digital Technology to the Largest Cities in 1987]

[Text]Jyvaskyla (HS)--A modern long-distance telephone exchange was dedicated last Tuesday in Jyvaskyla. It is the second of five DX-100 exchanges ordered by the Central Board of Posts and Telecommunications. The first was installed a year ago in Lahti. The next ones will be built in Oulu, Kouvola, and Rovaniemi.

The postal and telecommunications establishment is specifically digitizing its long-distance network during this decade. About half of the long-distance connections will have been joined to digital exchanges by the end of 1987. This will also include the largest cities, among others, by that time.

The DX100 is a digital exchange system in which voice signals are transmitted coded into numeric form. Control takes place through programmable processors.

Chief director V. A. Johansson said that one of the most important reasons for the shift to digital technology is that this technology and computer control make it possible to provide more service than before.

Chief director Johansson estimated that the most important phases of the digitization of local telephone networks will take place in the 1990's. The local netowrk in Korppoo has already been digitized, and work is in progress in Kangasniemi and Pielavesi. During the year 1984 local telephone subscribers in Kouvola and Kuusankoski will be joined to digital exchanges.

The telephone user himself will hardly notice the new technology, which serves to insure successful calls. If a call is interrupted or otherwise disturbed, DX100 immediately tells where the problem is. It will also make possible billing of individual calls, so that a subscriber will know where to, when, and for how long calls were made from his phone and how much each call cost.

The long-distance exchange was built by Telenokia Inc. According to its general manager, Sakari Salminen, the order placed four years ago by the postal and telecommunications establishment initiated the production of large digital exchanges in Finland.

9611
CSO: 5500/2289

BRIEFS

MOROCCO-CIT ALCATEL CONTRACT--CIT-Alcatel has just received three orders with a total value of Fr 85 million for supplying new central telephone exchanges to Malta, Sri Lanka and Morocco--countries that have already chosen the E-10 system. Malta, which has had an E-10 temporal network since 1975, has ordered an additional 16,000 lines and an extension of the cable network. Sri Lanka, where the system was installed last year, will receive a second central exchange with 21,000 lines, expandable to 45,000, to serve the new administrative center of Kotte and the southern outskirts of Colombo. In Morocco, where Fez has been equipped with an E-10 since 1975, Tangiers will receive a central exchange with 12,000 lines, expandable to 45,000. [Text] [Paris ELECTRONIQUE ACTUALITES in French 28 May 82 p 10] 11267

THOMSON TELEPHONE LINES IN MIDEAST--At the conclusion of an international consultation, Thomson-CSF [General Radio Co] has been chosen to build the "Medarabtel" radio-transmission network designed to provide telephone, television and telex communications among Saudi Arabia, the Yemen Arab Republic, the People's Democratic Republic of Yemen, the Republic of Djibouti, and Somalia. The project, which totals $18 million (or about Fr 108 million), is being financed by the Arab Economic and Social Development Fund (FADES). The Medarabtel network will be built for "turnkey" delivery by Thomson-CSF (radio equipment, pylons and antennas, buildings, shelters and energy), with the participation of the Italian company Telettra, which will supply 2-GHz radio equipment and the multiplex buildings. The new radio equipment from Thomson-CSF, of the 6-GHz 250 type (960 telephone channels plus 1 TV channel) and with low power consumption, will make it possible to use solar-energy power supply in many stations. [Text] [Paris ELECTRONIQUE ACTUALITES in French 11 Jun 82 p 9] 11267

EQUIPMENT FOR TELECOM-1--The DGT [General Telecommunications Directorate] has just awarded to Telspace a series framework contract relating to the supplying of intercompany stations and ground-station equipment for the Telecom-1 program. The first order involves the supplying of 50 stations that will be made available to the administration in the course of 1983. The contract follows upon the building of four prototype intercompany stations by Telspace, which is a GIE [Economic Interest Group] formed by Thomson-CSF and CIT-Alcatel. [Text] [Paris ELECTRONIQUE ACTUALITES in French 25 Jun 82 p 12] 11267

AEROSPACE COOPERATION WITH INDONESIANS--A new group--the Franco-Indonesienne d'Equipement Aeronautiques---has just been formed by 19 French companies belonging to the GIFAS [expansion unknown] equipment group. The objective of this group is to develop technical cooperation among the French builders of aerospace equipment, the official services and the Indonesian industrialists. The FIEA [Franco-Indonesian Aeronautical Equipment Group] will be chaired by Mr Guibe, president and general manager of Messier Hispano Bugatti. [Text] [Paris ELECTRONIQUE ACTUALITES in French 4 Jun 82 p 8] 11267

TELEPHONE TECHNOLOGY TRANSFER--Paris--The Barre government, which in 1979 authorized a contract between Thomson and the USSR for a telephone exchange manufacturing plant, had not evaluated correctly its international commitments at that time, according to present government circles. This contract, totaling 750 million francs, is now to be reviewed. The USSR, a major client of France in the realm of data processing, is especially interested in gaining access to the technology of the components and of the computers involved in the fabrication of telephone exchanges. The contract for this plant, which is to produce 1 million lines per year, involves the granting of licenses, the transfer of technology, engineering and technical assistance. Inasmuch as this contract presents "aspects not in accordance with France's international commitments," a Ministry of Industry communique indicates, the Mauroy government has "had to open negotiations with the Soviets to introduce several modifications into the project. These negotiations are under way." The Ministry further states that the technologies involved in this contract are of French origin. [Text] [Paris AFP SCIENCES in French 3 Jun 82 p 3] 9399

CSO: 5500/2293

TELECOMMUNICATIONS AGENCY DIRECTOR DISCUSSES TRENDS, PLANS

Oslo AFTENPOSTEN in Norwegian 18 Jun 82 p 25

> [Text] The telephone waiting list will be gone in 1985, and will be under 65,000 this year.
>
> The Telecommunications Agency's profits will total 405 million Kroner.
>
> The Telecommunications Agency's self financing is approaching 50 percent.
>
> Total productivity increased by 4.5 percent last year.

These were some of the highlights Kjell Holler, Director of the Telecommunication Agency, pointed out during the 1981 Annual Report presentation Thursday. Holler also noted that the Telecommunications Agency wishes to build an experimental site for cable TV in Trondheim. The Agency will follow up on the government's recommendation that foreign companies should have the opportunity to bid on its contracts.

Better productivity and lower than expected price increases led to a 127 million Kroner surplus for the Telecommunications Agency after a deficit of 200 million Kroner the previous year. The strong emphasis on expansion of the telephone network from the end of the 1970's, according to the Board of Directors, is beginning to show results.

"If we had obtained a similar prioritization in the beginning of the 1970's we would not have had a waiting list today," stated Holler.

97,000 Telephones Installed

During the last four years there has been a quadrupling of new subscribers. The net increase last year was about 97,000, while in 1978 the number was 46,000, so that the number of telephones in use in Norway increased from 45.2 units per 100 residents in 1980 to 48.5 units per 100 residents last year.

"We plan to complete the automation of the telephone network in 1985. This is a very expensive expansion, even though it will only affect 1.4 percent of our customers. In the four-year period from 1983 through 1986 the Telecommunications Agency will pay out about 170 million Kroner in severance pay to those who will lose jobs due to the automation," Holler pointed out.

The Telecommunications Agency is planning a greater degree of self-financing for future expansion. In 1981 we invested about 2.5 million Kroner, and 33 percent of this was self-financed. In 1982 we should approach about 46 percent self-financing, compared to 21 percent five years ago. We are watching the reaction among the politicians, but our long-term goal is to achieve the same arrangement as they have in Denmark and Sweden, where there is 100 percent self-financing.

Puzzled

Holler was puzzled by the debate surrounding the Telecommunications Agency's economic situation. "It is unproductive to debate such situations because the Telecommunications Agency operates with an interest ceiling of six percent on loan capital from the State," he remarked.

"I will be happy to sign an agreement with the Minister of Finance changing the interest we pay on loans to 11 percent, if at the same time we are allowed to retain the money we now pay to the Treasury," Holler stated.

It was additionally pointed out that by the end of 1985 a new billing system will be ready for Oslo and Bergin, enabling the Telecommunications Agency to avoid the large loss of interest they have today due to the long delay in sending out telephone bills. This amounted to 4.6 billion Kroner in 1981.

The Annual Report further stated that the Telecommunications Agency is planning to build an experimental site for cable TV in Trondheim. In cooperations with the Trondheim Newspaper Association they plan to send Swedish radio and television programs via cable to customers.

"We are not going to become involved in the wide spectrum of cable TV activities and joint antenna operations. The Telecommunications Agency must however, be involved in experimental acitvity to gain necessary expertise. Cable TV will be a part of the future integrated telecommunications network and will be the center of technical development over the long run."

"If we do not gain this expertise we will be poor advisors to government officials on a very central issue," Holler said.

The Telecommunications Agency's leadership will follow up on the lead given by the government, recommending that foreign companies be permitted to bid on contracts when the Telecommunications Agency continues its expansion.

"The Board of Directors had earlier organized a clear break with our earlier policy by working towards increased competition between the two Norwegian suppliers of telephone equipment, STK and Elektrisk Bureau. We have previously purchased equipment from both concerns," Holler said.

Professionals

Holler also lamented the loss of many professionals from key positions. He said that this could not continue, but hoped that new wage agreements permitting the signing of special contracts could stop the flight of professionals.

Total productivity increased by 4.5 percent, the highest increase up to now. If you calculate productivity as production per worker, it has increased from between nine and ten percent during the past year [as published].

The Telecommunications Agency is also satisfied with the new Nordic mobile telephone (NMT). The increase in total customers has exceeded expectations, resulting in some capacity problems. There are presently 5,400 NMT customers, compared to 1,670 in February. There are just as many customers today as expected at the end of 1981.

9984
CSO: 5500/2290

COUNTRY'S FIRST CABLE TELEVISION SOON TO START IN OSLO

Oslo DAGBLADET in Norwegian 6 Jul 82 p 4

> [Text] 15-20 minutes of local news and 40-45 minutes of reporting from local entertainment and sports programs--this is about the way the weekly hour of local TV from Janco-Visjon A/S will look when it is offered to about 75,000 households in Oslo beginning 1 September.

Eight Oslo newspapers will provide the substance of the news input on the local TV. In the first program all eight will present the layout, and in the following programs each individual newspaper will in turn have the responsibility for the local TV news.

The producer for the different program offerings will be Janco-Visjon A/S, and the company has hired two experienced media people: Jan Borg and Jan Akerjordet. The first has background from NTB [Norwegian Telegram Bureau] among others, and as a freelancer has sent TV inputs to a number of countries; the other has a long affiliation with NRK [Norwegian Broadcasting]. The newspapers will also utilize these two in part for program production.

Editorial responsibility for the local channel will be held by Jan Lindh at Janco-Visjon A/S. DAGBLADET has learned that the company will temporarily not operate with a budget for the 18-week test period, but that it will surely cost "several hundred thousand."

Expenses will be borne by Janco-Visjon A/S and the eight newspapers. Households connected to Janco's combined antennas will not be charged for the extra TV offering. The company says that they hope to be able to continue local broadcasting in 1983, but that they are dependent on financing--which probably only means public grants or advertising income.

To the question of whether Janco-Vision A/S has received many inquiries from groups who want to participate in the coming broadcasts, the reply was that a number of organizations, both ideal and religious, have shown great interest. Likewise "known names" among actors and educators have called the cable company and offered their services, and expressed hope for success for the entire project. "We certainly have many, many friends," they said at Janco-Visjon A/S.

The first program will go "on the air" or "on cable" on 1 September. It will also be repeated once for the next week's broadcast. The company said that the program offering can be expanded during the test period, but that they want to have some experience first.

9287
CSO: 5500/2307

END

JPRS 81630

25 August 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 235

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 81630

25 August 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 235

CONTENTS

ASIA

AUSTRALIA

Companies Support Standardization of Data Networks
(THE AUSTRALIAN, 29 Jun 82) 1

NEW ZEALAND

Apple Accused of Dumping in Computer Offer to Schools
(Various sources, various dates) 3

Local Manufacturer's Complaint
Customs Duty Required

'Dumping' Duty Imposed on Apple Computers for Schools
(THE PRESS, 23 Jul 82) 5

Government Ends Funding for Participation in Peacesat
(THE EVENING POST, 17 Jul 82) 6

Briefs
Satellite Receiving Station 7

VIETNAM

More Telecommunications Facilities, Equipment Reported
(QUAN DOI NHAN DAN, 1 Jul 82) 8

LATIN AMERICA

ECUADOR

Shortage of Telecommunications Equipment Viewed
(Napoleon Narvaez; EL COMERCIO, 13 Jul 82) 9

JAMAICA

Minister Discusses Need for Local Communications Industry (THE DAILY GLEANER, 23 Jul 82) 11

PARAGUAY

Briefs
- New Radio Stations 13
- New Mediumwave Station 13
- New TV Relay Station 13

NEAR EAST AND NORTH AFRICA

ISRAEL

Firms Emphasize Microelectronics R&D (Carol Novis; THE JERUSALEM POST, 29 Jul 82) 14

SUB-SAHARAN AFRICA

MOZAMBIQUE

New Improved Public Telephones (NOTICIAS, 10 Jul 82) 16

NIGERIA

Oyo State To Have Seven Television Stations (DAILY TIMES, 2 Aug 82) 17

SOUTH AFRICA

Nationalists' Use of TV To Impose Own Views Hit (Editorial; RAND DAILY MAIL, 24 Jul 82) 18

Briefs
- Johannesburg Television Transmitter 19

ZIMBABWE

Briefs
- GEC Telecommunications Tower 20

WEST EUROPE

INTERNATIONAL AFFAIRS

EEC Deliberates Further on IBM Monopoly Charge (Rex Malik; ZERO UN INFORMATIQUE HEBDO, 1 Jun 82) 21

ITALY

Stressed Optical Fibers, Their Use as Polarizing Components (Valerio Annovazzi Lodi, Slivano Donati; ALTA FREQUENZA, May-Jun 82) 24

COMPANIES SUPPORT STANDARDIZATION OF DATA NETWORKS

Canberra THE AUSTRALIAN in English 29 Jun 82 p 17

[Text] IN a major step towards open systems interconnection and networking between equipment supplied by different manufacturers, several major companies have announced their support for a set of local area network standards.

All these companies support the ISO (International Standards Organisation) transport protocol class 4 for the transport layer, which represents international standardisation of prior ECMA (European Computer Manufacturers Association) work.

For the lower layers they will support the new ECMA standard for the physical and data link layers.

The standardisation of these protocols will represent a major step to intervendor networking.

At the physical and data link layer these ECMA standards are largely compatible with Ethernet.

The interfacing of such local area networks with the public networks would usually be achieved through X.25.

It will be possible to integrate X.25 services into such local area networks.

The development of these standards, and continuing work within the ECMA community to define standards for networking, is seen as a precursor to international standardisation.

ICL was one of the first companies to declare its support for the newly ratified ECMA standard for open systems local area networking.

Other companies supporting this initiative include CII-Honeywell Bull, Digital Equipment Corp, Fujitsu Ltd, Intel, Computer Technology Ltd, Office Technology Ltd, Network Technology Ltd, Logica, Mitel Corp, Mostek, Nixdorf, Olteco (Olivetti Telecomunicazioni SPA), Siemens, Three Rivers Corp, Ungermann-Bass, L.M. Ericsson, 3 Com, Hewlett-Packard and Xerox Corp.

Commenting on this development, ICL's managing director Mr Robb Wilmot said: "The rapid spread of networking, based firmly on standardisation, will mean an acceleration of the information technology industry and will provide an opportunity, particularly for British industry, to become more competitive and productive.

"ICL believes this announcement will be recognised in time as being as significant for information technology as canals and railways in their time proved critical to the growth of the economy by providing the essential infrastructure for effective communication."

The standard would provide a sound foundation for the development of integrated office systems.

The key characteristic of a local area network (or LAN) is that it generally operates over short distances of up to 1.5km or so, to connect terminals of various kinds of one building, or a cluster of buildings on one site.

It has a wide band width and operates in broadcast mode, so that each device connected to the LAN sees all the messages in the network, but acts only upon those addressed to it.

Major advantages of the LAN are said to be its high reliability, ease of operation and the ease with which additional devices can be attached.

LANs consist of coaxial cabling with simple methods of connection, allowing many different types of equipment to be connected.

According to ICL, the wide and varied number of suppliers of different computing equipment which have now accepted this standard means the user now has a new and far greater freedom of choice when purchasing equipment.

The announcement concerns two areas of standardisation of which the most important is the transport layer, now an ISO draft proposal, which provides a guaranteed end-to-end data transfer which is universal and which will work over any physical medium.

The link and physical layer standards use CSMA/CD (carrier sense multiple access with collision detection) techniques approved by ECMA, and related to the physical medium being used, in this case base band coaxial cable.

It is the standardisation of the transport layer which is said to distinguish this new standard from existing Ethernet implementations.

A further reason for adopting this standard is the world-wide multi-discipline support which exists for it, according to ICL.

Through simple gateway devices, local area networks will be connected both to other LANs and to wide area networks (WANs), thus promising real open systems interconnection (OSI).

"The adoption of this standard opens the way to the development of networked systems," Mr Wilmot said.

"Users can plan with confidence, knowing that their investments in equipment can now be carried forward and fully protected.

"Using LANs, the expansion of systems will be easy.

"The range of choice open to users will be wider, both for small and large companies.

"ICL, for its part, is developing its products to implement the new standards."

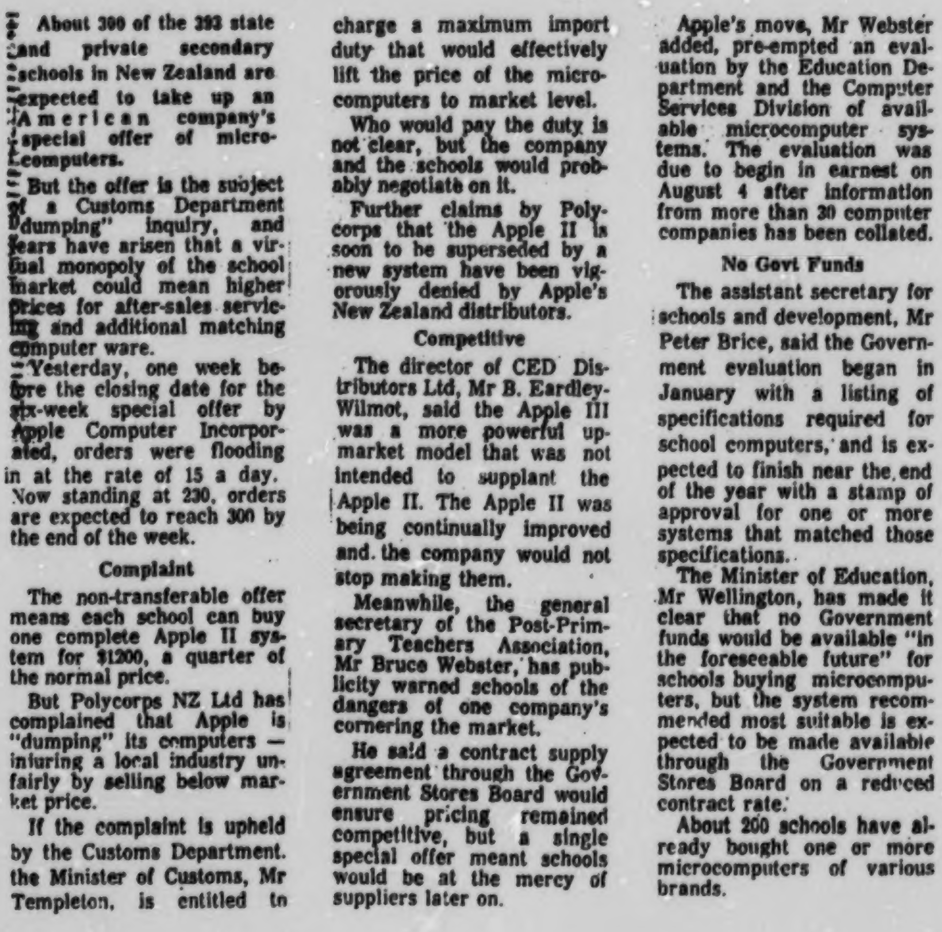
CSO: 5500/7554

APPLE ACCUSED OF DUMPING IN COMPUTER OFFER TO SCHOOLS

Local Manufacturer's Complaint

Auckland THE NEW ZEALAND HERALD in English 17 Jul 82 p 3

[Text]



About 300 of the 393 state and private secondary schools in New Zealand are expected to take up an American company's special offer of microcomputers.

But the offer is the subject of a Customs Department "dumping" inquiry, and fears have arisen that a virtual monopoly of the school market could mean higher prices for after-sales servicing and additional matching computer ware.

Yesterday, one week before the closing date for the six-week special offer by Apple Computer Incorporated, orders were flooding in at the rate of 15 a day. Now standing at 230, orders are expected to reach 300 by the end of the week.

Complaint

The non-transferable offer means each school can buy one complete Apple II system for $1200, a quarter of the normal price.

But Polycorps NZ Ltd has complained that Apple is "dumping" its computers — injuring a local industry unfairly by selling below market price.

If the complaint is upheld by the Customs Department, the Minister of Customs, Mr Templeton, is entitled to charge a maximum import duty that would effectively lift the price of the microcomputers to market level.

Who would pay the duty is not clear, but the company and the schools would probably negotiate on it.

Further claims by Polycorps that the Apple II is soon to be superseded by a new system have been vigorously denied by Apple's New Zealand distributors.

Competitive

The director of CED Distributors Ltd, Mr B. Eardley-Wilmot, said the Apple III was a more powerful upmarket model that was not intended to supplant the Apple II. The Apple II was being continually improved and the company would not stop making them.

Meanwhile, the general secretary of the Post-Primary Teachers Association, Mr Bruce Webster, has publicity warned schools of the dangers of one company's cornering the market.

He said a contract supply agreement through the Government Stores Board would ensure pricing remained competitive, but a single special offer meant schools would be at the mercy of suppliers later on.

Apple's move, Mr Webster added, pre-empted an evaluation by the Education Department and the Computer Services Division of available microcomputer systems. The evaluation was due to begin in earnest on August 4 after information from more than 30 computer companies has been collated.

No Govt Funds

The assistant secretary for schools and development, Mr Peter Brice, said the Government evaluation began in January with a listing of specifications required for school computers, and is expected to finish near the end of the year with a stamp of approval for one or more systems that matched those specifications.

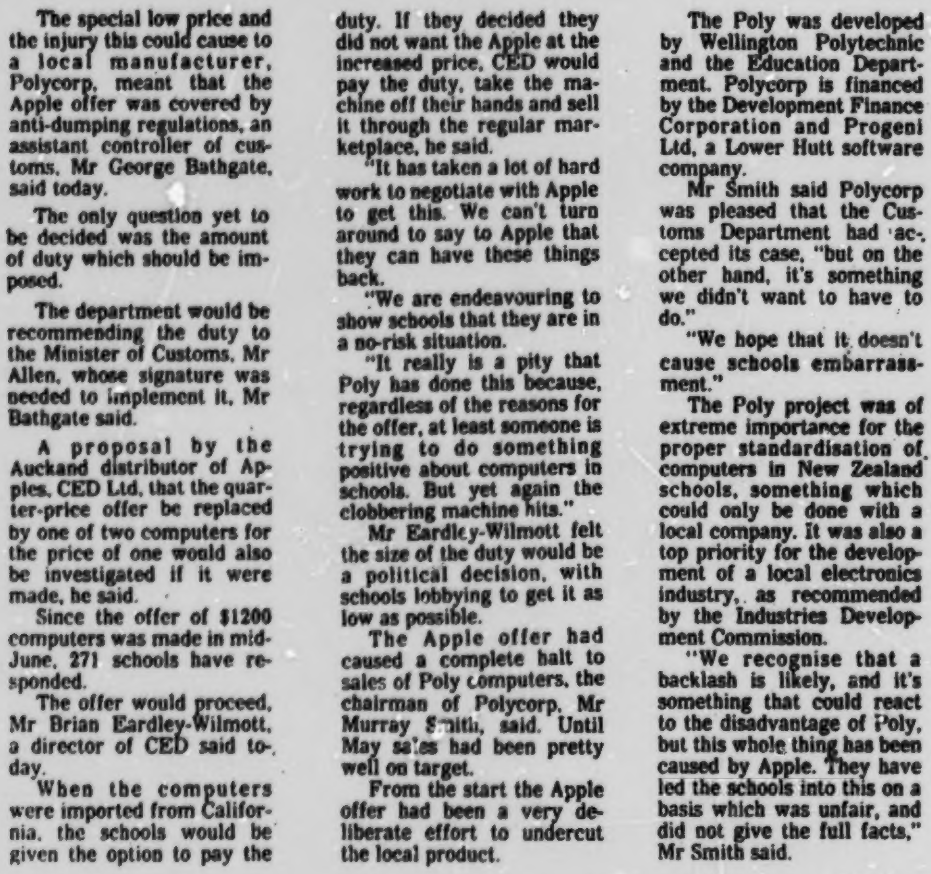
The Minister of Education, Mr Wellington, has made it clear that no Government funds would be available "in the foreseeable future" for schools buying microcomputers, but the system recommended most suitable is expected to be made available through the Government Stores Board on a reduced contract rate.

About 200 schools have already bought one or more microcomputers of various brands.

Customs Duty Required

Wellington THE EVENING POST in English 19 Jul 82 p 5

[Text] AN OFFER of quarter-price Apple computers to schools is commercial dumping, which should be liable for penalty duties, the Customs Department has decided.



The special low price and the injury this could cause to a local manufacturer, Polycorp, meant that the Apple offer was covered by anti-dumping regulations, an assistant controller of customs, Mr George Bathgate, said today.

The only question yet to be decided was the amount of duty which should be imposed.

The department would be recommending the duty to the Minister of Customs, Mr Allen, whose signature was needed to implement it, Mr Bathgate said.

A proposal by the Auckand distributor of Apples, CED Ltd, that the quarter-price offer be replaced by one of two computers for the price of one would also be investigated if it were made, he said.

Since the offer of $1200 computers was made in mid-June, 271 schools have responded.

The offer would proceed, Mr Brian Eardley-Wilmott, a director of CED said today.

When the computers were imported from California, the schools would be given the option to pay the duty. If they decided they did not want the Apple at the increased price, CED would pay the duty, take the machine off their hands and sell it through the regular marketplace, he said.

"It has taken a lot of hard work to negotiate with Apple to get this. We can't turn around to say to Apple that they can have these things back.

"We are endeavouring to show schools that they are in a no-risk situation.

"It really is a pity that Poly has done this because, regardless of the reasons for the offer, at least someone is trying to do something positive about computers in schools. But yet again the clobbering machine hits."

Mr Eardley-Wilmott felt the size of the duty would be a political decision, with schools lobbying to get it as low as possible.

The Apple offer had caused a complete halt to sales of Poly computers, the chairman of Polycorp, Mr Murray Smith, said. Until May sales had been pretty well on target.

From the start the Apple offer had been a very deliberate effort to undercut the local product.

The Poly was developed by Wellington Polytechnic and the Education Department. Polycorp is financed by the Development Finance Corporation and Progeni Ltd, a Lower Hutt software company.

Mr Smith said Polycorp was pleased that the Customs Department had accepted its case, "but on the other hand, it's something we didn't want to have to do."

"We hope that it doesn't cause schools embarrassment."

The Poly project was of extreme importance for the proper standardisation of computers in New Zealand schools, something which could only be done with a local company. It was also a top priority for the development of a local electronics industry, as recommended by the Industries Development Commission.

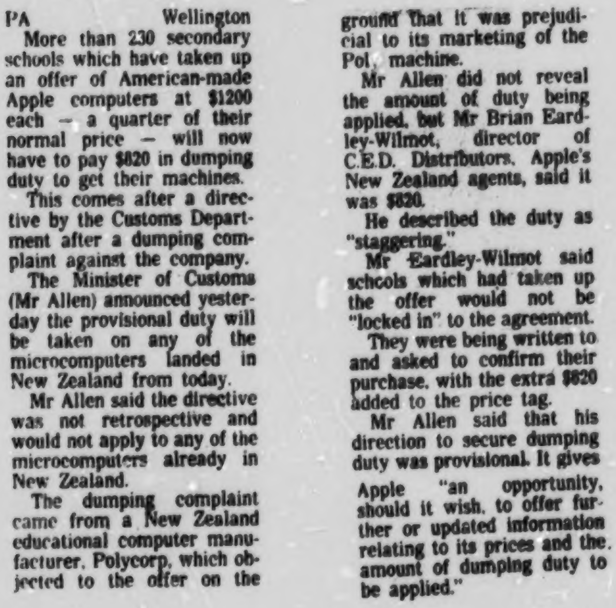
"We recognise that a backlash is likely, and it's something that could react to the disadvantage of Poly, but this whole thing has been caused by Apple. They have led the schools into this on a basis which was unfair, and did not give the full facts," Mr Smith said.

CSO: 5500/9033

'DUMPING' DUTY IMPOSED ON APPLE COMPUTERS FOR SCHOOLS

Christchurch THE PRESS in English 23 Jul 82 p 4

[Text]



PA Wellington

More than 230 secondary schools which have taken up an offer of American-made Apple computers at $1200 each — a quarter of their normal price — will now have to pay $820 in dumping duty to get their machines.

This comes after a directive by the Customs Department after a dumping complaint against the company.

The Minister of Customs (Mr Allen) announced yesterday the provisional duty will be taken on any of the microcomputers landed in New Zealand from today.

Mr Allen said the directive was not retrospective and would not apply to any of the microcomputers already in New Zealand.

The dumping complaint came from a New Zealand educational computer manufacturer, Polycorp, which objected to the offer on the ground that it was prejudicial to its marketing of the Poly machine.

Mr Allen did not reveal the amount of duty being applied, but Mr Brian Eardley-Wilmot, director of C.E.D. Distributors, Apple's New Zealand agents, said it was $820.

He described the duty as "staggering."

Mr Eardley-Wilmot said schools which had taken up the offer would not be "locked in" to the agreement.

They were being written to and asked to confirm their purchase, with the extra $820 added to the price tag.

Mr Allen said that his direction to secure dumping duty was provisional. It gives Apple "an opportunity, should it wish, to offer further or updated information relating to its prices and the amount of dumping duty to be applied."

CSO: 5500/9035

GOVERNMENT ENDS FUNDING FOR PARTICIPATION IN PEACESAT

Wellington THE EVENING POST in English 17 Jul 82 p 44

[Text] **Government funding for Wellington Polytechnic's participation in the Pan Pacific Education and Communication satellite experiment (Peacesat) has been stopped.**

Polytechnic council chairman Mr Martin Kimble said he had received a letter from the Minister of Education, Mr Wellington, telling him Peacesat's funding had been stopped as part of the Government's 3 percent cuts.

"I hope that it may still be possible to continue New Zealand participation in the satellite link," said Mr Wellington in his letter, received by the board at its meeting this week.

"However, now that Peacesat is providing a low-cost experimental communication network across the Pacific, I believe those availing themselves of the link could reasonably be expected to contribute to future running costs."

Wellington Polytechnic became part of the Peacesat network in 1971, operating with equipment set up by tutors and pupils from the school of physics, electronics telecommunications and electrical engineering.

Below $20,000

Polytech provided all the materials and equipment needed to establish the station and students set it up at no cost to the Polytech.

The Government's funding pays for the part-time employment of two people when the satellite is in operation, and money for the replacement of faulty parts.

Mr Kimble was unwilling today to disclose the actual amount, but said it was below $20,000 a year.

The base is the only one in New Zealand, and is part of a network which now comprises 20 countries in the Pacific. The satellite — Applied Technology Satellite number 1 (ATS1) — is owned by the American space agency, Nasa, and is in earth-stationary orbit above the equator and close to Christmas Island.

Its placement enables coverage of most of the United States and the Pacific.

The network operates for 21 hours a week, and provides the means for a number of groups, including scientists, teachers and religious groups, to exchange ideas and information.

Mr Kimble, who is president of the network's governing body, the Peacesat Consortium, said it was a shame Government had stopped its funding.

Host country

He said the Polytech station could be maintained for a few months using what was left from last year's funding, but long-term funding would have to be found.

If it could not be, New Zealand might be losing an important link with other countries.

"We have to think about the fact that New Zealand is the host country for very large numbers of people from the Polynesian areas," he said.

"We are providing dialogue with their home countries, and assisting in the understanding of their cultures. A lot of that will certainly disappear if Peacesat can't continue."

The Minister of Science and Technology, Dr Ian Shearer, announced recently the Peascesat network would be used in a new agricultural exchange project between Asian and Pacific countries.

Discuss it

Mr Kimble has written to Dr Shearer, telling him that Peacesat may not be able to continue.

"I have suggested that he discuss it with the Minister of Education," said Mr Kimble.

The Wellington Polytechnic Council has asked Mr Kimble to continue with his efforts to keep the Polytech station in operation.

CSO: 5500/9033

BRIEFS

SATELLITE RECEIVING STATION--Wellington (PA)--The Minister of Science and Technology (Dr Shearer) wants the Government to consider investment in a satellite receiving station. After meeting representatives of the European Space Agency yesterday, he said he planned to ask the Communications Advisory Council to prepare a separate report on such a station, or to include its conclusions in a report it is preparing on satellites in general. Dr Shearer spoke after attending a seminar at the Department of Scientific and Industrial Research at Gracefiled, Hutt Valley, held by two representatives of the E.S.A., on its oceanic remote sensing satellite. "Data from this satellite would give us a better idea of the fish resources in our waters," Dr Shearer said. He was told that a basic price for a receiving station in New Zealand could be about $8 million, with running costs about $650,000 a year, plus a further $600,000 for a memorandum of understanding. [Text] [Christchurch THE PRESS in English 17 Jul 82 p 1]

CSO: 5500/9034

MORE TELECOMMUNICATIONS FACILITIES, EQUIPMENT REPORTED

Hanoi QUAN DOI NHAN DAN in Vietnamese 1 Jul 82 p 1

[Article: "The Telecommunications Sector Increases Communications Equipment and Facilities"]

[Text] In the first half of this year, the telecommunications sector placed additional items of equipment and facilities into use and improved a number of those already available, heightening the capacity of the communications network.

Each part of axis 1A line has been immediately placed into use upon completion. Recently 66 communications channels linking Hanoi and Da Nang have been tested, accepted, and placed into operation; lines 2 and 3 are being installed and equipment is being assembled for a number of technical stations [tram co vu] from Da Nang southward. The copper cable project of the Hanoi-Hai Phong axis is at the stage of building the Hai Duong cable protection house [nha bao ve cap] and the Hai Phong technical house [nha co vu].

Telecommunications units have utilized many kinds of material supplies and items of equipment that was in storage, restored much old equipment, and placed it into use to serve the communications network. In the first half of this year, lines of the cable network were extended, and the number of carrier wave telephones, microwave equipment, and standard telephones increased by 2.5 to 13.7 percent. Twenty seven provinces and cities have been able to communicate directly with central organs without having to go through other telecommunications operators or requiring the combination of many telecommunications modes. Quang Ninh, whose microwave system feeds into the Hanoi-Haiphong line, is able to communicate directly with Hanoi. Communications lines with Laos (via satellite) and with Phnom Penh (via microwave) have been basically established. The communications line linking Ho Chi Minh City with Moscow (Soviet Union) has developed its action of serving oil and gas survey and provides the communication link between Cambodia and the Soviet Union.

With the use of containers, postal matters and parcel posts destined to various countries are transported and managed more favorably than before.

8418
CSO: 5500/5864

SHORTAGE OF TELECOMMUNICATIONS EQUIPMENT VIEWED

Quito EL COMERCIO in Spanish 13 Jul 82 p A-8

[Article by Napoleon Narvaez]

[Text] Quito and the rest of the country are suffering a disturbing shortage of telephone lines. The growth of the cities requires urgently the expansion of this means of communication, but to meet this requirement, an investment of more than 20 billion sucres, one-third of the national budget, is needed. This is an expenditure which the national economy is not in a position to meet, at least at present.

The capital has now about 100,000 electromechanical dial telephone lines and needs more than 300,000. The applications for telephones are in the hundreds, especially in condominium residences built in business and residential sections where in the past there were single-story houses.

According to official announcements, it will take at least 5 years to meet the requirements at the national level and especially in Guayaquil and Quito. This is due to the need to acquire technology and equipment. According to Ecuadorean Telecommunications Institute [IETEL] experts, this will call for bids for equipment for telephone exchanges, transmitters, cables for building the network and TELEX exchanges. All of this has been delayed, first because of the difficult administrative procedures and second the lack of money. According to information supplied by the government, steps have already been taken for calls for bids for 1980-1984.

However, in spite of the lack of resources, IETEL's First Regional Office is carrying out several projects. In the rural area, it has installed exchanges at Tena, Puyo, Coca and Lago Agrio. Similar exchanges have been set up in Tabacundo, Quinche, Guayllabamba, Pido, Puembo, Salcedo, Alausi and El Carmen. All have a maximum capacity of 250 lines and are linked to the national network and the customer can speak with any other point in the country and abroad.

In the absence of financing, it is hoped that the objectives of the 5-year tele-communications plan can be achieved by acquiring 25,600 central telephone lines with electromechanical technology in order to expand, using as a base existing equipment, the exchanges of Ibarra, Esmeraldas, San Rafael, Cumbaya, Latacunga, Guayaquil, Quevedo, Milagro, Libertad, Portoviejo, Machala, Loja and Huaquillas.

They are also planning to acquire 73,500 digital-controlled local lines for Quito, Guayaquil and Bolivar Province. For their operation, 18,000 exchange lines will be bought for traffic with Quito, Guayaquil and Cuenca. They will also buy 19,000 exchange lines for the capital and the port, equipment for the operations center and for maintenance, administration and management activity in these cities.

It was explained that so-called "poor telephone service" is caused by the insufficient capacity of the lines, long telephone conversations, the insistence on getting a line, often without taking into account the saturation of the calls in relation to the capacity of the telephone equipment and/or the complexity of service, involving extensive networks connecting the telephones through thousands of very small cable and sophisticated equipment.

Nelson Herreria, manager of Region One, promised for INTEL that the service will be improved. He announced that U.S. $12 million will be invested in new equipment and in the enlargement of exchanges to improve service and prevent the saturation caused by the customers who unknowingly cause congestion. The improvement of the service will be completed between 1982 and 1983. The experts explained that this new equipment does not mean that more lines will be available.

Two electronic exchanges will be bought for the TELEX, GENTEX and DATEX services with a minimum capacity of 3,100 TELEX customers and 900 trunk lines and 50 customers in the DATEX system. These exchanges will be set up in Quito and Quayaquil and they will be complemented by other equipment which will make the system operational at the national level.

To improve Quito's telephone service, IETEL will open up the pavement in many sections to install the primary and secondary networks. It was said that this is to install a technologically improved system. The country is served by 275,000 telephone lines and requires twice that capacity.

Finally, IETEL reported that the country has 28,000 direct dial telephone lines which are located as follows: 2,000 in Tulcan, 3,000 in Ibarra, 2,000 in Cotopaxi, 10,000 in Tungurahua, 6,000 in Chimborazo, the only province which has digital telephones. Bolivar, with 1,000 lines, is a province which has not yet been incorporated into the direct dialing system.

To summarize: in 1981 IETEL had an income of 1,052,000,000 sucres and spent 778 million. It needs adequate financing to carry out a new telecommunications program to have good technical service which is modern and sophisticated and will satisfy the customers.

9204
CSO: 5500/2309

MINISTER DISCUSSES NEED FOR LOCAL COMMUNICATIONS INDUSTRY

Kingston THE DAILY GLEANER in English 23 Jul 82 p 20

[Text] **THE MINISTER OF STATE** for Information, the Hon. Mike Henry, has said that the country must begin to lay the foundation for a communications industry, so that both the private and public media can become self-supporting as well as forming an important sector of the industrial community.

Speaking in the sectoral debate on July 14, Mr. Henry said that the country must search for the most scientific and objective forms of information. This meant that the printed word, radio and television programmes, films and audiovisual products must be seriously examined.

Mr. Henry continued: "Added to this, we must begin to lay the foundation for a communications industry, so that not only will the media—both private and public be self-supporting, but they will form an important sector of the industrial community, turning out products which we must now import, as well as exporting specially prepared products.

He said that the communications industry would require creativity and production.

With regards to the financial aspect, he said it should not be assumed that it is only the government who must spend money in this area.

HIGH RISK

He said investment in communications was still regarded as a high risk venture in Jamaica, but it was the most profitable area of speculation for the future.

Speaking on the Information portfolio, Mr. Henry said that the Ministry was putting together a three-pronged programme for the training of Government media personnel to meet immediate needs as well as short and long-term needs.

In this respect, he said the Ministry has already had discussions with representatives of the College of Arts, Science and Technology (CAST) and the University of the West Indies (UWI), as well as representatives of the media:

"We hope that the private media will also place training among their priorities," Mr. Henry said. "We cannot continue stealing staff from each other. We must advance in a coherent and planned fashion. We must open the world to our creative ability."

He said in most national information policies today, audience evaluation, including scientific analysis, marketing surveys and feed-back, is prominently featured.

HE SAID HIS MINISTRY has already been involved with two surveys: one through the Jamaica Broadcasting Corporation (JBC) which was a marketing survey, and a second experimental in-depth survey of television viewing, for the proposed second television channel.

Mr. Henry said the Ministry was about to commission three more studies, which would keep it abreast of what the information needs were and what Jamaicans feel about the media. Based on such studies the Ministry will make policy — using the latest methods.

NEW JIS

Mr. Henry said that an advisory committee is to be named soon to finalize the plans for the reorganization of the Jamaica Information Service.

The committee will be comprised of communications specialists, technicians and bureaucrats who will ensure the most professional plan of action, as well as a smooth transition for the JIS.

He said it took the government more than the entire first year of its administration to clean up most of the mess which it had inherited at the JIS.

He said the foreign exchange situation was still a major problem in getting the JIS properly equipped to meet current demands.

Some new tape recorders have been put in, new vehicles bought but the service was still behind in the acquisition of television cameras and recorders, colour equipment, portable projectors, film making equipment, photographic equipment and sound machines.

The film unit was only capable of producing eight 10-minute films and three half hour films annually. Another problem was the rapid turnover of Information Officers.

CSO: 5500/7555

PARAGUAY

BRIEFS

NEW RADIO STATIONS--The executive branch has canceled the license granted to Mr Hilarion Antonio Correa to operate radio station "Radiodifusoras Caaguazu" on both medium wave and FM frequencies with the call signs ZP 19 and ZPV 19, respectively. Instead, Mrs Francisca Lujan Vda. De Correa has been authorized to install and to operate two radio stations in the city of Coronel Oviedo: one of medium wave on 1570 khz whose transmitter will not exceed 1 kw; and another FM station on the 101.7 frequency whose transmitter will not exceed 5 kw. [Asuncion HOY in Spanish 3 May 82 p 10 PY]

NEW MEDIUMWAVE STATION--By Decree No 33,863, the executive branch has authorized the national cement industry to install and to operate a mediumwave radio station in Vallemi Port. The station, which will be named ZP29 Radio Vallemi, will broadcast on 650 khz and its transmitting power will not exceed 5 kw. The license will have to be renewed every year. [Asuncion HOY in Spanish 16 Jun 82 p 10 PY]

NEW TV RELAY STATION--The executive branch yesterday authorized Teledifusora Paraguaya Inc. to install and to operate a TV relay station in the city of Pedro Juan Caballero. The station, which will be called Channel 9 Teledifusora Paraguaya Inc., will transmit with a 1-kw power and should be on the air within 8 months from the date of the authorization. [Asuncion HOY in Spanish 7 Jul 82 p 10 PY]

CSO: 5500/2321

ISRAEL

FIRMS EMPHASIZE MICROELECTRONICS R&D

Jerusalem THE JERUSALEM POST in English 29 Jul 82 Supplement p 12

[Article by Carol Novis]

[Text]

THE DEVELOPMENT of microprocessors and electronic digital equipment has had a revolutionary effect on the telecommunications industry throughout the world. And Israeli firms have managed not only to keep up with new developments, but also to create their own profitable niche in world markets.

Telrad, a Koor subsidiary, is one Israeli company which has achieved the transition from electromechanical telephone equipment to fully automated telecommunications systems, in the process raising exports from $1 million in 1978 to $15 million in 1981 on an annual turnover of $65 million. This year's export target is $20 million.

A strong R&D force of 110 employees and an expenditure of 7 per cent of revenues on R&D is one reason the firm gives for its achievements. Says head of the development branch David Raveh: "We can compete with anyone, even the Japanese."

Telrad channels its development activities in two main areas: adaptation and redesign of products for which rights have been acquired abroad, and original development of their own designs.

One of the firm's key products, worked on intensively since 1979, is their Key bx total telephone system, which has achieved substantial sales success. This electronic telephone system has over 20 special features. For example, you can dial with the receiver on the hook, you can store frequently used numbers and speed dial them. Then you can hold a five-party conference call, and activate a do-not-disturb function which transfers calls automatically to another station.

When a line is busy, the speaker can be informed of a waiting outside call, and other stations can call through the loudspeaker while a telephone conversation is in progress.

The optional digital display on each instrument — a first in the field — shows the time, elapsed time call, call-back station number, busy lines and the number dialed. Research for the Key BX project was sponsored by the American Israel Foundation.

Since the system was introduced, a number of variations have been made available, according to needs of individual customers, such as an extention of the number of trunk lines.

Telrad also manufactures a versatile public-line digital exchange system with up to 5,000 lines. This can transmit voice and data simultaneously on the same line by means of electronically coded digital pulses.

What lies ahead for the modern office? According to Raveh, the main trend for smaller business communication systems seems to be in efforts to increase flexibility and reduce costs and time.

TADIRAN, with 1,600 employees in its telecommunications division, of whom 700 are engineers, and with some $30 million earned in exports last year, is one of the largest in the telecommunications field in Israel. It is equally optimistic about the prospects for Israel's penetration into the international market.

"We sell brainpower," says division manager Haim Rosen. "You don't need oil for that."

Tadiran also produces a line of sophisticated electronic telephone systems, which does practically everything in an office but make the coffee. It's features include such things as conference calls, call-queuing (if the line you are calling is busy, the system will automatically keep calling and let you know when the line is free) and night answering.

Other central office systems the company has developed include a computerized telephone directory system, sold to governments in Turkey, Finland and Greece, to look up numbers automatically, and an interceptor system, which automatically provides the new number for a caller who dials the old number.

Tadiran also markets a complete computerized rural telephone system to provide small, isolated communities with the same service available to big-city residents.

In the transmission field, a great deal of research has been done into savings on the vast quantities of copper wire needed to make the connection between the user and the switching premises.

The result has been the development of a range of multiplexer equipment which can take many voice channels, transform them into data and transmit them through pulses over a single line.

Tadiran has been active in developing voice and data products, both digital and analogue, with military and civilian applications.

One of the most promising fields of the future is fibre optics, and Tadiran, which entered the field five years ago, is now testing a fibre-optic telecommunication network system in Israel. The system uses light instead of electro-magnetic signals to transmit. Fibre-optic cables are lighter, smaller and cheaper than copper wire.

Looking into the future, a description of some of the products Tadiran is working on sounds like a science fiction vision of a micro-processor-driven world.

As well as office services systems, which can be linked up to such equipment as copiers, word processors and fascimile machines, Tadiran is experimenting with electronic mail transmission and an electronic voice system which stores a voice message and plays it back at a convenient time.

Ahead, too, lies a cashless community in which shopping, banking and other functions can be done through home terminals. Tadiran plans to be there with the right equipment when that happens.

ANOTHER ISRAELI company which is making efforts to maintain a competitive edge in the expanding computerized communications industry is Motorola Israel Ltd.

Motorola Israel has the advantage of having an American parent firm which is the second largest in the world in semi-conductors and micro-electronic technologies, thus giving them access to the latest state-of-the-art techniques. But the local company also as an extensive R&D programme, on which it spends some 7.5 per cent of its revenue.

Exports amounted to $24 million in 1981, about 40 per cent of the firm's total sales, and major efforts have been made to penetrate the North American market — with some success: about one-third of all exports go to the U.S. and Canada.

The firm's major products include radio communication systems, data communication systems, radio alarms, motitoring and control equipment, as well as a wide range of military electronics.

Particularly successful has been automatic irrigation-control systems, which, as far as possible, computerize agriculture. Sensors in a field give information on such factors as wind, temperature and water pressure, and this is transmitted to a central computer which adjusts irrigation accordingly. The result, according to Motorola, is a saving in energy, labour and water, as well as better corps.

In the field of communications, the firm produces an Intrac 2000 radio-control system which enables a central station to communicate safely and accurately with a number of remote, unmanned units. It can be used, for example, by the military, for security and control of ammunition and nuclear storage areas, or for smoke and fire detection.

Motorola plans to devote efforts in the future to the development of communications equipment, such as radio-telephones, digital line communication and computerized command and control stations.

THE ELECTRONICS CORPORATION of Israel Ltd. — ECI — has also helped put Israeli telecommunications products on the world map with their unique Telephone Line Doubler system.

This system can increase the capacity of trunk lines by detecting the silent periods which occur in normal conversation and filling them with voice signals with the use of sophisticated micro-processors and control circuitry.

Thus, congested telephone trunk lines can carry more than twice as many telephone conversations as they normally do, saving substantial amounts of both time and money. The system is compact, portable and easy to install.

The Telephone Line Doubler has achieved success overseas and is now in operation in 14 countries with exports expected to reach some $9 million this year, up from $3.5 million last year.

Carol Novis

CSO: 5500/4734

NEW IMPROVED PUBLIC TELEPHONES

Maputo NOTICIAS in Portuguese 10 Jul 82 p 2

[Excerpts] New public telephones will soon be installed in Maputo and subsequently in other provinces of the country, Mozambique Telecommunications Company official Avelino Afua announced. Afua added that 704 instruments imported from England are already in Mozambique.

The new telephones are equipped with an electronic mechanism, replacing the mechanical mechanism, enabling users to make lengthier calls and to place inter-city calls.

The instruments, metal-plated (which makes them highly resistant to abuse), consist of a telephone, an unbreakable metal coin box and a microtelephone cord with steel wires encased in plastic.

Another noteworthy feature of the new telephones is the construction of the microtelephone set, which can only be removed with the use of a special key, thus preventing the blatant theft that occurs with the present instruments.

Booth Construction Under Study

According to Afua, the shortage of lumber is temporarily delaying construction of the booths in which the phones will be installed.

A study of their construction concluded that the booths should be built of solid wood and also designed to withstand abuse of this public property.

Training Installers

Meanwhile, instruction in the installation and mechanical adjustment of the phones is being given in an intensive 15-day mini-course, which began on 7 July at the facilities of the Training Center of the Mozambique Postal Service in Maputo.

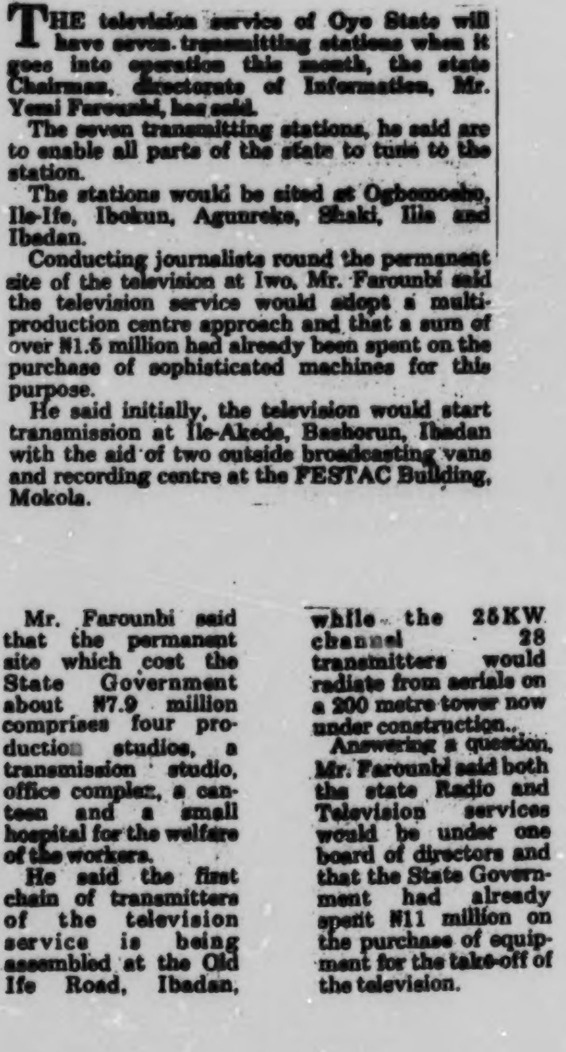
The course is being taught by Albert Scrafton, a British technician specialized in this field, and is aimed at training Mozambican technicians to install and service the telephones.

6362
CSO: 5500/5876

OYO STATE TO HAVE SEVEN TELEVISION STATIONS

Lagos DAILY TIMES in English 2 Aug 82 p 5

[Text]



THE television service of Oyo State will have seven transmitting stations when it goes into operation this month, the state Chairman, directorate of Information, Mr. Yemi Farounbi, has said.

The seven transmitting stations, he said are to enable all parts of the state to tune to the station.

The stations would be sited at Ogbomosho, Ile-Ife, Ibokun, Agunreke, Shaki, Iila and Ibadan.

Conducting journalists round the permanent site of the television at Iwo, Mr. Farounbi said the television service would adopt a multi-production centre approach and that a sum of over ₦1.5 million had already been spent on the purchase of sophisticated machines for this purpose.

He said initially, the television would start transmission at Ile-Akede, Bashorun, Ibadan with the aid of two outside broadcasting vans and recording centre at the FESTAC Building, Mokola.

Mr. Farounbi said that the permanent site which cost the State Government about ₦7.9 million comprises four production studios, a transmission studio, office complex, a canteen and a small hospital for the welfare of the workers.

He said the first chain of transmitters of the television service is being assembled at the Old Ife Road, Ibadan, while the 25KW channel 28 transmitters would radiate from aerials on a 200 metre tower now under construction.

Answering a question, Mr. Farounbi said both the state Radio and Television services would be under one board of directors and that the State Government had already spent ₦11 million on the purchase of equipment for the take-off of the television.

CSO: 5500/5882

NATIONALISTS' USE OF TV TO IMPOSE OWN VIEWS HIT

Johannesburg RAND DAILY MAIL in English 24 Jul 82 p 5

[Editorial]

[Text] THIS week's reports that the Government might allow an independent television channel are far too good to be true. One does not have to be an astute television critic to realise how the Nationalists are using the existing TV service to impose their views on the public.

SABC-TV's one-sided coverage of the Ingwavuma and KaNgwane land deal once again provided telling evidence of how Auckland Park serves the Nationalists' cause. To believe that the Government will entertain the idea of relinquishing part of this control by allowing the establishment of a totally independent service, is so far-fetched as to be virtually unthinkable.

It is all very sad, of course, as there is no substitute for competition in the pursuit of excellence. Which is a major reason why both the radio and TV services of the SABC — staffed as they are by some very talented people — seldom get beyond mediocrity.

But while it is unfortunately difficult to imagine the Government sanctioning an independent fourth channel, there does appear to be some hope for discerning viewers. Bophuthatswana wants to set up a TV service which will be able to beam programmes throughout the Witwatersrand. Mr Henry Howell, chairman of the Bophuthatswana Broadcasting Advisory Board, confirmed this week that talks between the South African and Bophuthatswana governments were continuing.

People living in the Johannesburg area will know that Bophuthatswana already has a successful radio station, Channel 702, which is making strides against the SABC's listenership monopoly. While it is difficult to imagine a homeland's TV service enjoying carte blanche to do exactly as it pleases, it is reasonable to believe that even within the restrictions that might apply, such a service can hardly fail to be a worthwhile competitor to the SABC.

Amidst the talk about possible new channels, it is ironic to have SABC-TV screening Westgate's portrayal of Bonnie Thornton as a controversial television interviewer. Here was TV interviewing at its sharpest and inquiring best. It's the way it should be done. Perhaps some hope remains: if the SABC can allow such good investigative journalism in a soap opera, there's at least a chance that the practice will spill over into real life, into TV's everyday news programmes.

CSO: 5500/5881

BRIEFS

JOHANNESBURG TELEVISION TRANSMITTER--A second TV2-TV3 transmitter in Johannesburg will begin operating full time on 16 August. The transmitter will eventually be used to facilitate either TV2 or TV3 once the second channel has been separated. In the meantime it will be used as an additional transmitter for TV2 or TV3 and the first month of operating will be considered a test period. Normal TV2 and TV3 programs will be broadcast but transmissions may be interrupted during this period without prior warning or apology in order that adjustments or repairs may be made. The transmission will be on channel six and horizontally polarized. VHF receiving antennas color coded blue will give best results. [Text] [LD111625 Johannesburg International Service in English 1600 GMT 9 Aug LD]

CSO: 5500/5885

BRIEFS

GEC TELECOMMUNICATIONS TOWER--The GEC telecom tower off the Hatfield Road in Harare has recently been completed with the addition of a dish aerial. The aerial, which is 3.7 metres in diameter, was added to the 85,5 metre tower last week. The tower has been built as part of the communications system for the NRZ electrification scheme in which GEC Zimbabwe is playing a major role. [Text] [Harare THE FINANCIAL GAZETTE in English 30 Jul 82 p 2]

CSO: 5500/5886

EEC DELIBERATES FURTHER ON IBM MONOPOLY CHARGE

Paris ZERO UN INFORMATIQUE HEBDO in French 1 Jun 82 p 40

[Article by Rex Malik]

[Text] The European Community vs.IBM: the case has taken a new turn after the hearing last February before the EEC commission responsible for competition policy within the Common Market (DG IV).

IBM's status has been a major element in the company's defense. As a European company, it pointed out that if convicted of the charge, the Japanese would be the only ones who would benefit. And in the second place, as any action taken against IBM would also affect competition in the United States, the only competent authority in this case is the U.S. government itself, according to IBM's defense arguments.

The hearing followed investigations that have been going on since 1974. The week-long hearing set a precedent, since no company before had been given so much time to speak. Then the normal procedure consists of announcing the steps that IBM would have to take, in order to make the market more competitive. At this stage, the company can either accept or reject the commission's decisions. If it rejects the ruling, it can then appeal to the European Court of Justice. That is the final recourse, at the end of which IBM will have to bow to the court's verdict.

The objections of the European Commission are based on four types of arguments. First of all, in the computer market, IBM enjoys a position from which it has improperly benefited. In what way? By not selling principal computer memories separately from the central units, by providing information only to its direct customers, and finally, by establishing a policy that binds inseparably the operating system and the equipment.

Over 2,000 Pages

Aside from its actual defense, a diplomatic memo indicates that the U.S. secretary of commerce sent his general counsel, Sherman Unger, as a simple observer. But other sources reveal that Mr Unger spent a considerable amount of time with the vice chairman of the commission, Frans Andriessen, and with the director, Manfred Gaspari.

He also publicly stated that the commission should not pursue its action.

The written defense is contained in three huge volumes, totalling over 2,000 pages, with a great deal of testimony as well as the results of studies conducted by IBM.

Prejudicial Remedy

The defense arguments include several facets. First of all, IBM claims that the DG IV did not follow the normal and customary procedure used in this type of case. IBM claims that, because of its worldwide operation, the remedies proposed by the commission could not be limited just to Europe, but would also have consequences everywhere else, in particular in the United States.

As the outcome of the case against IBM in the United States favored IBM, it seems difficult (claims IBM) for the European Commission to reach different conclusions. In fact, the commission can not dispute the fact that competition plays the same role in the United States as it does in Europe.

Furthermore, IBM clearly drew the attention of the commission to the fact that the action taken against IBM would benefit only the Japanese. On this issue, however, we can comment that this argument does not take into account the moves by some European companies, such as ICL and Siemens, who recently signed agreements with Japanese companies, such as Fujitsu. The European companies felt this was the only way they could possibly compete with IBM.

Another type of argument attempts to show that the computer market is not like what was described by the commission. IBM explained at length that the market is open, and that all companies have access to it, stating that there is no IBM monopoly. Citing examples, IBM claimed that there are a good number of cases in which IBM supplied the first equipment, which was later completed either with other IBM equipment, or in many instances, with equipment made by other companies.

Memory Losses?

On the problem of memories, IBM won a tactical victory through the technical presentation of its expert, who is also the commission's expert, explaining the difficulty of separating central units. On this point, an attorney for the Memorex firm turned around the argument. He cited examples of central units of the 370/155 and 370/165 models sold without their memory.

A final element, one whose weight can not be underestimated, was cited by Jacques Maisonrouge. IBM in Europe is among the 10 biggest taxpayers of the European Economic Community. Each year it pays about 500 million ECU [European Currency Units].

Since the hearing, the commission has decided to pursue its action, and there are indications that 2 more years of deliberations will be needed before a conclusion is reached.

7679
CSO: 5500/2304

ITALY

STRESSED OPTICAL FIBERS, THEIR USE AS POLARIZING COMPONENTS

Milan ALTA FREQUENZA in English May-Jun 82 pp 159-163

[Article by Valerio Annovazzi Lodi, Slivano Donati, Istituto Di Elettronica, Universita Di Pavia: "Stressed Optical Fibers and Their Use as Polarizing Components"]

[Text]

ABSTRACT - *After treating the most common cases of fiber stressing, i.e., bend, twist and transversal compression, we show how to make polarizing components (i.e., wawe retarders, rotators and, in principle, polarizers) by means of short pieces of monomode fiber to which a controlled stress or bending is applied.*

I Introduction

Recently, some developments in instrumentation based on monomode optical fibers have dealt with the polarization properties of the mode propagation [1, 2]. This topic is also related to the well-known microbending and stress-induced effects in telecommunication applications of monomode fibers, where usually the polarization state is not maintained. Oppositely, if the waveguide modifications are introduced in a controlled way, we can build a number of polarizing components useful in several applications.

Polarizing components made by short pieces of fiber may be used to implement several functions in electrooptic instrumentation, e.g. modulators, wawe retarders, polarization rotators, particularly in all-fiber configurations of interferometers and gyros. Generally, those examples reported so far are of the transversal compression type, and a mechanical actuator or a piezo-transducer is used to stress normally the axis of a short section of a straight fiber sample [3]. In this work we present a different type of retarder, based on a small loop of fiber, which can be easily trimmed to quarter and half-wawe: such a device is very stable, reproducible and simple to implement.

Also, we analyze in a unified view the main schematic cases of stress induced birefringence, i.e. flexure, compression and twist. In our analysis we assume a small stress approximation, i.e., a linearity regime, and derive simple but accurate expressions for the evaluation and the design of stressed fiber components.

Finally, we present experimental results that fit adequately well the theoretical expressions.

II Compression and Torsion Birefringence

IIa Compression Stress

Let us consider a compressive force F applied normally to the axis of a circular monomode fiber of lenght L, as in fig. 1a. To schematize the effects of compression on the index of refraction distribution, we consider the stress components T_1 and T_3 along the x_1 axis which can be expressed in terms of F by the following equations [4]:

$$(1) \quad T_1 = \frac{F}{2\pi r L} \cos^2 2\vartheta$$

$$(2) \quad T_3 = \frac{F}{2\pi r L} (1 - 4\cos^4\vartheta)$$

where r is the outer fiber radius and the angular coordinate θ is shown in fig. 1. Here, it is $T_1 > 0$, $T_3 < 0$ according to the definition of stress and to the usual sign convention of the theory of elasticity [5]. We use the standard notation $S_k = s_{kl} T_l$ to express the strain/ stress equation and we note that, in an isotropic material like the fiber can be assumed, the elastic matrix s_{kl} depends only on the two parameters υ and E, i.e., the Poisson and Young moduli.

The stress distribution produces a variation of the refractive index in the fiber, i.e., a linear birefringence whose principal axes are x_1 and

x_3, by simmetry. Now, we can express the variation of the impermittivity tensor components as [5]:

$$(3)\quad \begin{aligned} \Delta k_i &= q_{ij} T_j \\ \Delta k_i &= p_{ij} S_j \end{aligned}$$

where q_{ij} and p_{ij} are the stress and strain elastooptic coefficients which, for an isotropic material, are such that $q_{11} = q_{22} = q_{33}$, $q_{12} = q_{21} = q_{13} = q_{31}$, $q_{44} = q_{55} = q_{66} = (q_{11} - q_{12})/2$, $q_{ij} = 0$ for $i+j>5$, $i \neq j$. Similar relations hold for the p_{ij}'s.

From eq. (3), using the definition of n, we get the variation of the refractive index along the axis x_i [5] as:

$$\Delta n_i = -1/2\ n^3\ q_{ij} T_j$$

n being the refractive index in umperturbed conditions. We have then:

$$(4)\ \Delta n_3 - \Delta n_1 = 1/2\ n^3\ (q_{11} - q_{12})(T_1 - T_3)$$

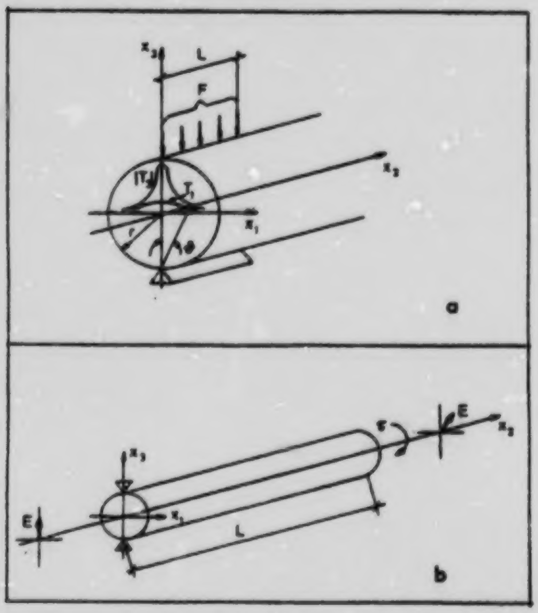


Fig. 1a) - *Compression of an optical fibre by a force F. The strain distribution T_3 and T_1 are also shown.*
Fig. 1b) - *Twist of an optical fiber by an angle τ.*

Since both the stress distributions T_1 and T_3 are rather flat around their maxima (located on the x_3 -axis), we may assume a constant birefringence in the core, neglecting mode distortions. Taking the averages of T_1 and T_3 on the core, we get at the first order:

$$(5)\quad \begin{aligned} T_{1C} &= \frac{F}{2\pi r L} \\ T_{3C} &= \frac{-3F}{2\pi r L} \end{aligned}$$

At the fiber output, the relative phase-shift between two modes polarized along the principal axes (i.e., two orthogonally polarized LP_{01}) is then:

$$(6)\quad \Delta\Phi_{31} = 2n^3\ (q_{11} - q_{12}) F/(\lambda r)$$

where λ is the vacuum wavelength.
This result can be expressed in terms of p-coefficients [6] by eqs. (3), obtaining:

$$(7)\quad \Delta\Phi_{31} = 2n^3 \frac{1+\nu}{E} (p_{11} - p_{12}) \frac{F}{r\lambda}$$

From eqs (6), (7), one can see that a linear polarized field fed into the fiber may change into circular or elliptical after propagation, since the fiber acts as a birefringent plate. Since the quantity $q_{11} - q_{12}$ is negative for silica, the fast and slow axes are that of the applied force and that perpendicular to it, respectively. The differential phase-shift depends on *F*, but neither on the lenght *L* nor on the core diameter.

IIb. Torsion Stress

Secondly, let us consider the case of a monomode fiber twisted by an angle τ around its axis as in fig. 1b: this leads to circular birefringence of the fiber sample.

The only non-zero components of the stress are now, in a first approximation (which disregards the small axial stress T_2):

$$(8)\quad T_4 = \frac{\tau}{L} x_1 \frac{E}{2(1+\nu)}$$

$$(9)\quad T_5 = -\frac{\tau}{L} x_2 \frac{E}{2(1+\nu)}$$

The [ε] tensor can be obtained from the [k] tensor which is directly related to the p_{ij}'s. We have, at the first order:

$$(10)\quad \begin{aligned} \varepsilon_1 &= \varepsilon_2 = \varepsilon_3 = n^2 \\ \varepsilon_5 &= 0 \\ \varepsilon_4 &= -\varepsilon_5 = -p_{44}\tau r n^4/L \end{aligned}$$

where the abbreviated notation is used also for the components of [ε].

Note that, since the permittivity tensor depends on the coordinates, it is important to consider the fiber as true guiding structure, rather than as an indefinite homogeneuos medium; the solution is then found by setting the boundary conditions. By inserting eqs. (8), (9), (10) in Maxwell's equations and carrying on the subsequent modal analysis, one can find [7] for ΔΨ, the circular birefringence phase difference in a monomode fiber:

$$(11)\quad \Delta\Psi = -\ n^2 p_{44}\tau$$

Therefore, the plane of polarization of a linear-polarized field becomes rotated by an angle:

$$(12)\quad \Delta\Phi = -\ 1/2 n^2 p_{44}\tau$$

Since, for silica, $p_{44}<0$, the optical rotation is in the same sense as the twist angle.
Note that also in this case the total effect does not depend on L.

From eqs (8) through (12) it appears that all the information needed for expressing the twist birefringence is contained in the matrix [p] or [q]. In fact, it is easy verified that the maximum linear birefringence perpendicularly to the fiber axis is proportioual to the circular birefringence along the fiber axis. Incidentally, we note that the proportionality coefficient is found to be $2\pi\ an/\lambda = \sin 2\theta$, θ being the angle that a circular polarized field propagating along the fiber axis makes with the axis itself in its fictitious helicoidal motion.

IIc - Experimental Results

Experiments were performed on several pieces of Valtec SMO5 graded index monomode fiber, using a polarized 5 mW He-Ne laser as the source and a photodiode power meter as the detector. Power was fed into the fiber, whose end-faces were prepared by cleavage, through a 10 mm microscope objective. The first 10 cm piece of the fiber served to ensure the propagation of the fundamental mode and to suppress higher-order modes through a tight loop (see next paragraph). The measurements were performed by polarizing plates inserted before the power meter, as a comparison between unstressed and stressed conditions of the 20 cm piece of fiber following the launch loop. Preliminary evaluation of the fiber showed that its beating length (the length of a 2π birefringence phase shift see [1]) was well in excess (>> 1m) of the usable pigtail lengths, so that its residual birefringence could be safely neglected.

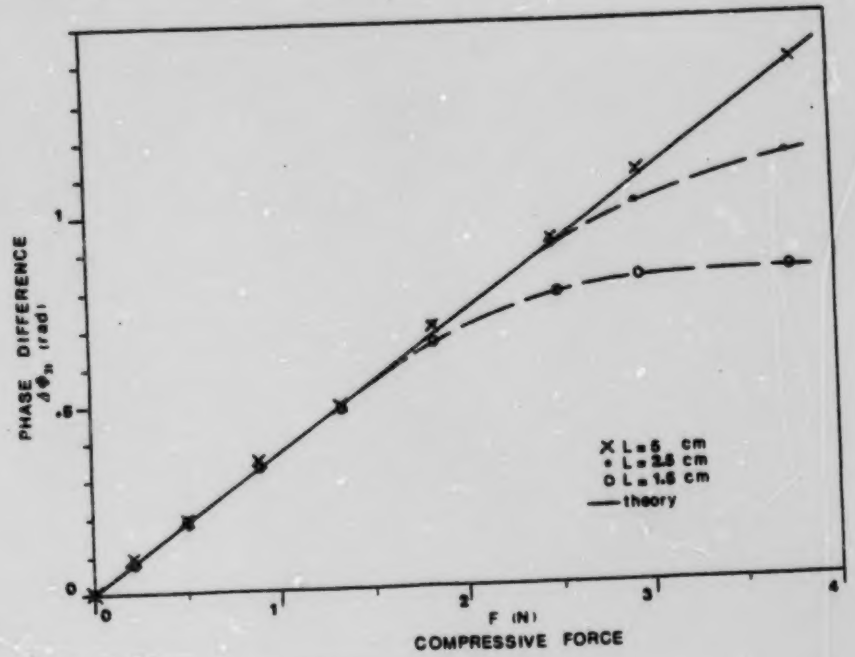


Fig. 2 - *Experimental points and theoretical curve for the compression birefringence effect. The range of linearity depens on* L.

In fig. 2 and 3 experimental points and theoretical curves are reported for fiber compression and torsion respectively. The points are the result of a number of measurements performed on several pieces of fiber which showed remarkable reproducibility within the typical error of a few percent; also, no hysteresis was found stressing the fiber up to the points shown in fig 2 and 3. Linearity is well maintained in the former case up to F/L = 120 N/m and in the latter up to the breakage point. For the fiber twist, however, (fig. 3), it was observed a small deviation from the theoretical prediction near the origin; this is difficult to explain since the degree of polarization was not degraded more than a few percent (ruling out residual linear birefringence of the fiber), and the nonlinearity did not depend on the sign of τ (ruling out circular birefringence).

in our computations we assumed [6]:

n = 1.52
r = 70 μm
a = 8.5 μm
λ = 633 nm
υ = 0.17
E = $7.3\ 10^{10}\ m^2/N$
p_{11} = 0.121
p_{12} = 0.270
p_{44} = $(p_{11} - p_{12})/2 = 0.15$

Mechanical actuated lateral compression has been used [3] in feedback loops for birefringence compensation; twisting is useful for variable polarization rotators.

While it is not easy to maintain a constant compressive stress for a long time, the birefringent components made by torsion or bending (see next paragraph) are much more stable.

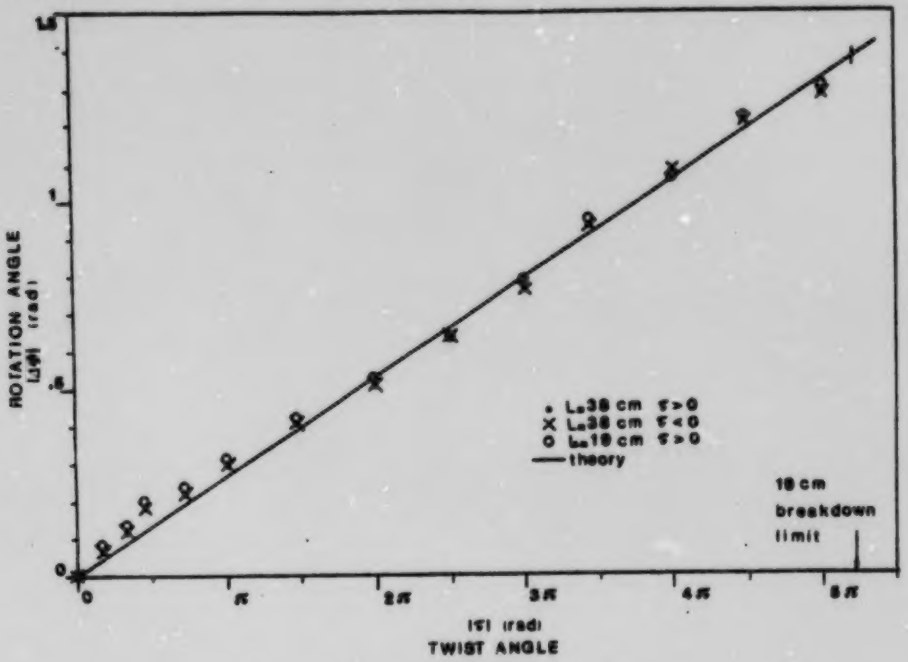


Fig. 3 - *Experimental points and theoretical curve for twist birefringence.*

$$\Delta\Phi_{31} = \frac{\pi L}{2\lambda} n^2 (p_{11} - p_{12})(1+\nu) r^2 / R^2 \qquad (13)$$

where *R* is the curvature radius.

Eq. (13) was derived by considering the fiber as a homogeneous and isotropic bar: the effect of mode distorsion was therefore neglected. As a consequence, we found that the predictions of eq. (13) were rather inaccurate when the ratio r/R was greater than 10^{-3}, resulting, e.g., in an error of about 25% for $r/R = 8\ 10^{-3}$.

A more accurate result can be obtained by taking into account the fiber guiding properties. When the fiber is bent, the electric field distribution for both the orthogonal polarized modes is pertubed and its maximum does not lie on the fiber axis but is a little displaced along the bending radius at a point *M* whose coordinates have the following dependence [9]:

$$x_{1M} = 0 \qquad (14)$$

$$x_{2M} = da^2 / R \qquad (15)$$

Here, *a* is the core radius, *R* the radius of curvature and *d* is a constant to be determined which depends on the fiber characteristics. The parameter *d* can be obtained from the expression of the electric field distribution for the curved fiber [10], [11] along the radius of bending, i.e.:

III Bending Birefringence

Let us consider a monomode fiber bent along an arc or coiled: we can neglect the torsion component of the strain provided that the radius of curvature is not too small; in other words we assume that the fiber is simply flexed (see fig. 4). Ulrich [8] has evaluated the phase difference due to the stress induced birefringence as:

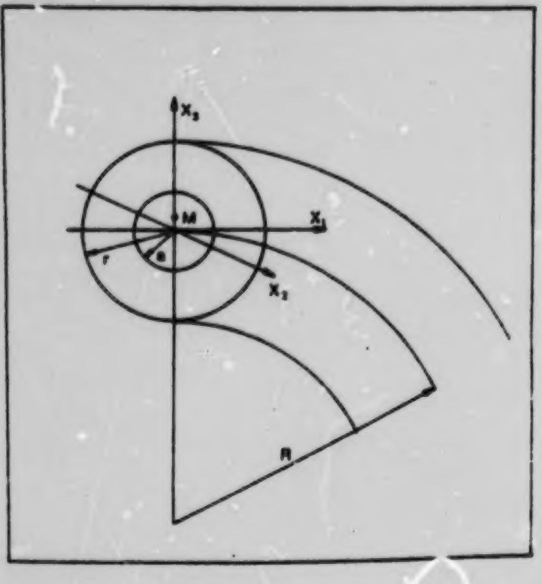


Fig. 4 - Fiber bending schematics; the maximum of the electric field distribution is displaced along the x_3-axis to point M (see text).

$$(16)\quad E_{xi} = J_0(ur/a) - \frac{v^2 u a}{R\delta}\left(\frac{r^2}{4u^2a^2} + c\right)J_1(ur/a)$$

$i = 1,3$

In this equation, δ is the relative refractive index difference of the fiber and parameters *u*, v, *c* can be found in Ref. 11. Since we expect little field distortion to occur under our assumption of small stress, we can use a first order approximation for the derivative of eq. (16) to determine the coordinates of point *M*, thus obtaining for the parameter *d*:

$$(17)\quad d = \frac{1}{4b\delta}$$

where *b* is the normalized propagation constant of the weakly guiding theory [12].

Consider now that the transversal section of the bent fiber cannot be longer considered as circular but becomes distorted [13], thus leading to a variation of the local density or the material as well as of the refractive index. We can easily obtain the refractive index difference for the two distorted LP_{01} modes corresponding to point *M*.

With this aim, we consider the strain distribution along the axis x_1 and x_3 in the fiber section. Making an approximation of the same order of that employed in deriving eq. (13) [8], we can neglect the effect of the strain component S_1, while S_3 can be expressed as [13]:

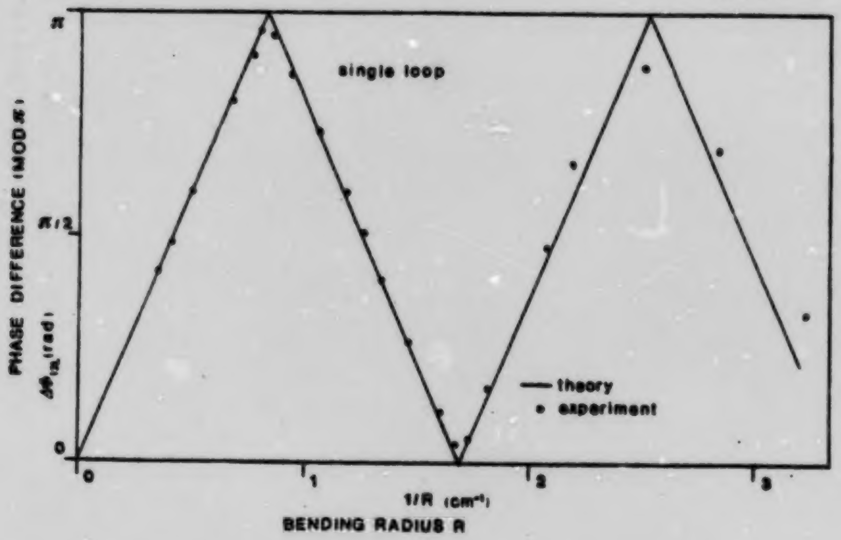


Fig. 5 - Experimental points and theoretical curve for the bending birefringence effect in a single loop of fiber.

(18) $S_1 = -\upsilon x_0/R$

The refractive index difference in the point *M* is then:

(19) $\Delta n_1 - \Delta n_3 = 1/2\; n^3 (p_{12} - p_{11})\, \upsilon x_{0M}/R$
$= 1/2\; n^3 \upsilon\, d\, (p_{12} - p_{11})\, a^2/R$

Since for silica the quantity $p_{12} - p_{11}$ is positive, we can conclude that the fast axis coincides with the curvature radius. The relative retardation between the two polarizations is then:

(20) $\Delta\Phi = \Delta\beta\, L$

and since for weakly guiding fibres [12]:

$$\beta = (2\pi/\lambda)\, n\, (b\delta+1)$$

$$\Delta\beta = (2\pi/\lambda)\, (b\delta+1)\, \Delta n$$

whe have:

(21) $\Delta\Phi_{11} = (\pi/4\lambda)\, (b\delta+1)\, (b\delta)^{-1}\, L n^3\, (p_{11} - p_{12})\, \upsilon\, a^2/R^2$

This expression is similar to eq. (13) but it shows a dependence on the guide parameters. Moreover, the total effect is found to be proportional to the core (not the clad) radius. Eq. (21) holds under the assumption of linear elastic behaviour, but does not require a negligible field perturbation assumption.

In practice, it is useful to implement birefringent components by making small *loops* or *coils* of optical fiber and then trimming their bending radius; the greater the number of loops, the greater the accuracy, but also the bending attenuation incrases. For a single loop eq. (21) gives:

(22) $\Delta\Phi_{1L} = (\pi^2/2\lambda)\, (b\delta+1)\, (b\delta)^{-1}\, n^3\, (p_{11} - p_{12})\, \upsilon\, a^2/R$

showing a dependence on 1/R.

We have fabricated several samples of $\lambda/2$ and $\lambda/4$ retarders by this loop techniques and found that their reproducibility and stability in time were very satisfactory without special requirements of mechanical assembly. In particular we report in fig. 5 theoretical and experimental results pertinent to eq. (22). The agreement is good except for very small values of the bending radius where nonlinear effects are probably present and the strain cannot be longer considered as due to a simple flexion. Computations were made using the parameter values reported in Sec. 2 and furtherly assuming $b = 0.6$ and $\delta = 2.2 \times 10^{-3}$ [12].

When a fiber is bent, an attenuation is introduced due to the excitation of radiative modes, the attenuation constant being proportional to exp (-R) [14]. For most applications, the radius *R* of the birefringent component must be choosen for a minimum attenuation, but in some cases one may exploit this effect for mode filtering, since the attenuation depends on the order of the mode.

Whe have tested these considerations on a sample of Valtec SMO5 which is two-mode at 630 nm. With radius of the loop around 1 cm. or less, we got a good attenuation of the higher mode. In the range 5.8 mm > R > 12 mm we have the possibility of obtaining any differential retardation in addition to an efficient mode filtering and a small attenuation of the fundamental mode; a good reproducibility was found for these components.

In fig. 6 we report the measured attenuation for both polarizations of the LP_{01} mode along with the theoretical attenuation curve for the higher mode LP_{11} [14].

The attenuation difference between the two orthogonal polarizations of the fundamental mode suggests the possibility of making polarizers and this will be the object of further investigations. Note also that this effect may be partially responsible for the nonlinearity shown in fig. 5 for 1/R > 2.

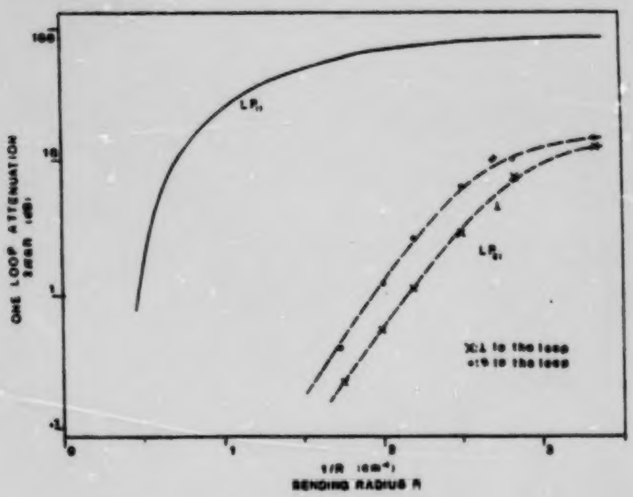


Fig. 6 - Single loop attenuation for the LP_{01} mode: differential attenuation between the two polarizations has been found. The theoretical curve for the mode LP_{11} [14] is also reported showing a conspicuous attenuation difference respect to the fundamental mode.

ACKNOWLEDGMENTS. One of us (VAL) performed this work under a fellowship awarded by Selenia Industrie Elettroniche Riunite. The work was also supported by che CNR contract CT 80.02036.07

Manuscript received on 8/1/1982

REFERENCES

[1] I.P. Kaminov: *"Polarization in Optical Fibers" JQE 17-1 (1981), 15.*
[2] R. Ulrich, M. Johnson: *"Fiber - ring interferometer: polarization analysis" Opt. Lett. 4-5 (1979), 152.*
[3] R. Ulrich: *"Polarization stabilization on single mode fiber" Appl. Phys. Lett. 35-11 (1979), 840.*
[4] O. Belluzzi: *"Scienza delle Costruzioni" Vol III, Zanichelli, Bologna (1969).*
[5] J.F. Nye: *Physical Properties of Crystals", Clarendon Press, Oxford (1960).*
[6] D. Gray, ed.: *"American Institute of Physics Handbook", Mc Graw Hill, New York (1976).*
[7] R. Ulrich, A. Simon: *"Polarization optics of twisted single mode fibers" Appl. Opt. 18-3 (1979), 2241.*
[8] R. Ulrich, S.C. Rashleigh, W. Eichoff: *"Bending induced birefringence in single mode fibers" Opt. Lett. 5-6 (1980), 273.*
[9] D. Marcuse: *"Field deformation and loss caused by curvature of optical fibers" JOSA 66-4 (1976), 311.*
[10] J. Sakai: *"Microbending Loss Evaluation in Arbitrary - Index Single Mode Optical Fibers" JQE 16-1 (1980), 36.*
[11] J. Sakai, T. Kimura: *"Fields in a curved optical Fiber" JQE 17-1 (1981), 29.*
[12] D. Gloge: *"Weakly Guiding Fibers" Appl. Opt. 10-10 (1971), 2252.*
[13] L. Landau, E. Lifchitz: *"Théorie de l'Elasticité", MIR, Moscow (1967).*
[14] H.G. Unger: *"Planar Optical Waveguides and Fibres", Clarendon Press, Oxford (1977).*

CSO: 5500/2320

END

JPRS 81683

1 September 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 236

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 81683

1 September 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 236

CONTENTS

ASIA

AUSTRALIA

Minister Expounds Federal Communications Policy
(N. Rothwell; THE AUSTRALIAN, 1 Jul 82).................... 1

Labor Party Platform on Communications Stresses Technology
(THE SYDNEY MORNING HERALD, 6 Jul 82)...................... 3

New, Lower Priced, Telecom-Approved Modem Offered
(THE WEST AUSTRALIAN, 30 Jun 82)........................... 4

Questions on Telecom Role Addressed by Davidson Study
(THE WEST AUSTRALIAN, 7 Jul 82)............................ 5

ABC Staff Sees Public Service Controls Continuing
(K. Childs; THE AGE, 8 Jul 82)............................. 7

Work on First Local Microchip Plant to Start in 1984
(P. Beard; THE AUSTRALIAN, 5 Jul 82)....................... 8

Briefs
CSIRO on Satellite Station--Canberra 9
Telecom Job Losses 9
Satellite TV from U.S. 9

LATIN AMERICA

ARGENTINA

CNIE President on Study, Design of Domestic Satellite
(M. Pena; AEROSPACIO, Jan-Feb 82).......................... 10

SUB-SAHARAN AFRICA

INTER-AFRICAN AFFAIRS

Briefs
International Microwave Network 16

IVORY COAST

Briefs
New Lines Slated 17

MADAGASCAR

Briefs
Microwave Network Inaugurated 18

SOUTH AFRICA

Negotiations for Bophuthatswana TV Station Reported
(J. Boekkooi; THE STAR, 27 Jul 82)........................ 19

Briefs
R&D Expenditure 21
Terms of Electronics Probe 21

ZAIRE

Briefs
France to Provide Transmitter 22

WEST EUROPE

INTERNATIONAL AFFAIRS

Briefs
Direct TV 23

FEDERAL REPUBLIC OF GERMANY

Plans, Outlays for Space Satellite Program
(FRANKFURTER ALLGEMEINE, 15 Jul 82)........................ 24

FRANCE

PTT to Open First Professional Telematics Network
(D. Levy; ELECTRONIQUE ACTUALITIES, 11 Jun 82)............ 25

Consultation with Other Nations Expected Before UIT Conference
(REVUE FRANCAISE DE TELECOMMUNICATIONS, Apr 82)............ 27

New Report on Transborder Data Flow Published
(J. Porracchia; ZERO UN INFORMATIQUE HEBDO, 14 Jun 82)..... 30

Integrated Service Teletel Gives Evaluation of Program
(REVUE FRANCAISE DES TELECOMMUNICATIONS, Apr 82)........... 33

MINISTER EXPOUNDS FEDERAL COMMUNICATIONS POLICY

Canberra THE AUSTRALIAN in English 1 Jul 82 p 2

[Article by Nicholas Rothwell]

[Text]

THE Federal Government expects private industry to accept much of the cost of developing telecommunications technology, the Minister for Communications, Mr Brown, said in Sydney yesterday.

In his first major policy speech, Mr Brown told a business seminar that the Government could "only do so much". The seminar is considering commercial opportunities offered by such technology.

He called for wider involvement of the private sector in communications.

Government would assist private developers if it received clear presentations and submissions for projects, based on "facts and figures".

Mr Brown said he was not pre-empting the three major government inquiries into communications that were shortly to be presented to Parliament: commissions inquiring into the operations of the postal service, telecommunications and cable, and subscription television.

"These three major reports could well herald important changes in the way these services are structured and organised," he said.

Rapid changes were taking place in telecommunications, a field that affected all Australians, and governments had a responsibility to ensure that any developments were introduced in a manner consistent with broad legislation and policy.

The inquiry into telecommunications could provide a blueprint for decision-making and the formation of national policies in this field.

The three inquiries were inter-related.

Decisions made as a result of them would establish the environment for Australia's move into the field of satellite communications.

"The satellite is a very important first step as far as Australia's domestic communications are concerned," Mr Brown said.

"Although the emphasis until now has been on the benefits of the system to the rural community, it will be crucial in aviation communications and will serve all parts of the population."

The Aussat company established to operate the domestic satellite system was expected to begin paying its way shortly after the satellite began earning revenue in 1966.

The advance of technology would create more jobs than it destroyed, he said.

The Opposition spokesman on industrial relations, Mr Hawke, told the seminar that the introduction of new technology would cause serious unrest in industrial relations unless there was an immediate and radical revision in the way it was introduced.

He said the jobs of women were particularly at risk as a result of the phasing in of labor-saving equipment, and this problem would remain until discrimination against women in the educational system was ended.

A radical reform of the education system was essential because it was the low-skill, temporary jobs done by women that were most at risk.

Mr Hawke said the ALP had not "set its face against the new technology" but warned that the rapid introduction of new processes was likely to be a source of increasing industrial unrest.

There have been a lack of consultation by management with workers about the speed of introduction and the Government should sponsor a test case before the Arbitration Commission to establish minimum standards in this area.

The trend towards a two-level workforce made up of unstable, low-paid and unskilled workers and a high-paid technological elite was already apparent in Australia.

"The prospects are anything but causes for optimism, since in a high unemployment economy there is little protection for the worker and unlike the other major industrialised countries we have no national legislation protecting the work force," Mr Hawke said.

CSO: 5500/7556

LABOR PARTY PLATFORM ON COMMUNICATIONS STRESSES TECHNOLOGY

Sydney THE SYDNEY MORNING HERALD in English 6 Jul 82 p 12

[Text] CANBERRA. — Greater attention to new technology and a financial boost for statutory authorities such as Telecom are to be part of the ALP's new platform on communications.

The policy will ensure that private enterprise cannot buy profitable areas of Telecom and it will be allowed to compete with new services such as videotext.

Communications spokesman Senator John Button said the substantially redrafted platform recognised that communications were at the cutting edge of all new technology.

The other factor clearly reflected in the platform was that communications had recently become very profitable and for the first time private enterprise was taking an interest.

Another main objective would be to "prevent socially and economically undesirable attempts" to dismember Telecom and Australia Post. Current restraints on Telecom in borrowing money would be removed.

The policy also repeats its previous call for as large a diversity of media sources as possible and monopoly ownership being restricted.

Special assistance would be provided towards the publication, printing and distribution of newspapers, books, magazines and other printed material fully produced in Australia.

Studies would be carried out on the feasibility of fostering the establishment of a newspaper, independent of both Government and existing private interests, and owned by those who produce it.

In the telecommunications field, the platform calls for the preservation of a single publicly owned system including terrestrial and satellite components and all cable systems.

CSO: 5500/7556

NEW, LOWER PRICED, TELECOM-APPROVED MODEM OFFERED

Perth THE WEST AUSTRALIAN in English 30 Jun 82 p 62

[Text]

THAT irrepressible Dick Smith has dealt another slap in the eye to the computing establishment by releasing a Telecom-approved data modem for less than half the price of any other available in Australia.

Modems are the gadgets which allow audible tones, usually from a telephone, to be turned into the digital form which the computer can understand (and vice versa); hence they are an integral part of the new "dial-in" services to huge data banks.

With modems costing about $800 a year to lease from Telecom—more than the cost of some personal computers—or $400 to buy, Dick Smith spotted a rare opportunity for some dramatic price undercutting.

"It was obvious that the communications revolution wasn't ever going to get under way in Australia until people could buy a really low cost modem," the entrepreneur said.

"I've always been pretty lukewarm about manufacturing electronic equipment in Australia, but I'm so confident about this new modem that we're gearing up to make it in big numbers."

The new Dataphone modem, which costs $169, is not an acoustic-coupled type but a directly connected device.

Its designer, Mr Jim Rowe, selected this approach because it offered the only way to achieve high performance and reliability at a low price.

"The problem with acoustic couplers is that, no matter how good they are, the end result still depends heavily on the rather antiquated carbon-granule microphone used in most Australian telephones," Mr Rowe explained.

"Direct connection bypasses the carbon mike altogether and makes it much easier to provide a high level of performance and reliability."

CSO: 5500/7556

QUESTIONS ON TELECOM ROLE ADDRESSED IN DAVIDSON STUDY

Perth THE WEST AUSTRALIAN in English 7 Jul 82 p 62

[Text]

AUSTRALIA is caught in a worldwide revolution in telecommunications which is leading to an explosive growth in the production, storage, processing and transmission of information.

This revolution is expected to set in motion social change which, while at present dimly perceived, could be as profound as the invention of the printing press.

The modern-day revolution, irrespective of social consequences, is already a highly profitable area of investment for those who know what they are doing.

Of course, one of the reasons the rate of return is so high is that the Government has severely restricted Telecom's access to the Australian capital market so that it is able to undertake only the most profitable projects.

Clearly private corporations with the necessary technological capabilities would like a slice of the market, which is presently denied them through regulation.

The Federal Government decided to exclude Telecom from the videotex system of providing information such as classified ads, or department store bargains, through the home television receiver, in spite of universal departmental advice to the contrary.

In spite of the exclusion of Telecom in favour of the Packer publishing and television and the Myer retailing interests, they have not been able to set up the Prestel videotex system as planned and promised.

It now appears that Telecom, because of its expertise, will have to be involved in the operation of the Prestel system.

A crucial factor in the final carve-up of Australian telecommunications between public and private interests will be the report of the Davidson committee into telecommunications services.

The three key submissions to the Davidson inquiry are from the Treasury, Department of Finance and Telecom.

Interestingly, neither submission makes a strong case for the exclusion of Telecom from the new services being opened up.

The Department of Finance said: "While Telecom should not be necessarily excluded from participating in any area of telecommunications activity in future, the onus should be placed on those who would oppose greater private sector involvement to demonstrate the benefits that would accrue from the expansion of Telecom's activities."

According to the Department of Finance, where it was found competition was warranted, a tax-paying subsidiary would be set up to operate at arms length from Telecom to ensure Telecom did not indulge in cross-subsidisation and predatory pricing.

Treasury said it thought Telecom should be confined to providing a basic service and excluded from the new growth ahead.

If these views prevail, Telecom will be left to maintain the basic service which is almost in place.

So who would take over the explosive growth in telecommunications associated with the information revolution?

To read the departmental submissions, the impression is created that hundreds of entrepreneurs will be jostling for a place in a perfectly competitive market.

[illegible] fact, if Telecom is excluded from the market it will be dominated by five or six multinationals led by IBM and ITT.

The overall thrust of the Telecom submission to the Davidson committee seems to be a general confidence that it can compete successfully against the private sector in the new areas of telecommunications because of the existence of the natural monopoly.

CSO: 5500/7556

ABC STAFF SEES PUBLIC SERVICE CONTROLS CONTINUING

Melbourne THE AGE in English 8 Jul 82 Green Guide p 1

[Article by Kevin Childs]

[Text] THE stranglehold of public servants on the ABC remains in spite of the "cosmetic" changes announced in Canberra this week.

This is the reaction of the 4000-strong ABC Staff Association, which represents 90 per cent of ABC staff. And its secretary, Mr Nick Collis-George told Green Guide: "We are now lucky to stay on the air most nights."

He said that half of the technicial staff had left the ABC since 1975 and not been replaced.

"What we are seeing is a war of attrition: the staff is down by 1000 in six years and the budget is down in that time by 28 per cent in real terms."

Although it is removed from direct Public Service control, the ABC must still provide details on its plans to allocate its reoursces. Mr Collis-George described this as a "con" which continued the control by public servants.

He was supported by James Dibble, the ABC newsreader and Staff Association Federal president, who said that the ABC's technological strength had been eroded by skilled staff moving to better paid jobs in commercial televisions.

Those remaining faced a heavier workload and frustrated attempts to achieve more pay.

"Despite managerial agreement with the justice of their claims, their efforts have been continually blocked by the co-ordinating committee," Mr Dibble said. "We cannot see this position changing..."

Mr Collis-George said that AP managers had told him that they could no longer effectively manage the ABC because of Public Service controls.

Doubts also surround the statement by the ABC that it had no plans to use the newpapers' news agency, Australian Associated Press (AAP), although entitled to do so by the Government's latest decision.

Mr John Lawrence, Federal president of the Australian Journalists' Association, which opposes the move, said that the temptation to use AAP instead of ABC reporters on some news would be irresistible.

CSO: 5500/7556

AUSTRALIA

WORK ON FIRST LOCAL MICROCHIP PLANT TO START IN 1984

Canberra THE AUSTRALIAN in English 5 Jul 82 p 17

[Article by Philip Beard]

[Text] CANBERRA'S plant for making computer chips, indefinitely deferred earlier this year, looks like coming out of mothballs.

Work on the $150 million wafer fabrication plant, Australia's first major microchip manufacturing operation, is expected to start in 1984, the Minister for the Capital Territory, Mr Hodgman, said.

In March, the company operating the proposed plant at Bruce, National Semiconductor Corp, announced that because of a downturn in demand, the project would be suspended indefinitely.

But, speaking in London yesterday, Mr Hodgman said executives of the California-based group had told him that an upturn in market conditions meant work could start in the next 18 months to two years.

Mr Hodgman said Natsemi was confident that "Australia would be first cab off the rank in any of the company's overseas expansion".

The plant, which would directly employ 1200 people, would go into production in 1986-87, about two years later than planned.

The project has attracted some controversy because of the Federal Government's decision to provide land and buildings worth $20 million to enable operations to start.

Mr Hodgman defended the decision, pointing out that the plant would directly and indirectly create more than 2000 new jobs in the Canberra area, and could be the start, of a high-technology industry, with employment prospects for up to 100,000 people before the turn of the century.

The minister said this would be bigger than the textile, clothing and footwear industries, or equal to the motor vehicle industry.

It is understood that Australia beat Israel and Ireland to the Natsemi investment.

Mr Hodgman, who is looking at bringing international high technology investment into Australia in his role as Minister Assisting the Industry and Commerce Minister, Sir Phillip Lynch, said that the Los Angeles-based Hughes Aircraft Co and the Canadian-based telecommunications group, Mitel, were interested in setting up operations in Australia.

Hughes is already supplying sophisticated components for the domestic communications satellite.

CSO: 5500/7556

BRIEFS

CSIRO ON SATELLITE STATION--CANBERRA--The upgrading of a Federal Government satellite receiving station could lead to windfall profits through the discovery of fishing grounds and mineral deposits, a CSIRO official said yesterday. The chief of the CSIRO division of mineral physics, Dr Ken McCracken, said improvements to the Government's Landsat station at Alice Springs were essential to obtain information from new satellites. He said the $6.5 million cost was a "bargain basement price". Private industry groups have also urged the Government to commit money to the improvements in the August Budget. They have said that without them the station will not receive signals from an advanced resource satellite to be launched by the US in July.[Melbourne THE AGE in English 30 Jun 82 p 5]

TELECOM JOB LOSSES--HUNDREDS of people have lost jobs at Telecom because of new technology, the Labor Party said yesterday. The Leader of the Opposition in the Senate, Senator Button, said in Canberra that many more in rural areas were affected by the switch. He said that 1350 jobs had been lost at Telecom through new technology since 1976. Senator Button, Labor's spokesman on communications and rural development said only 200 of those displaced had been found other government jobs. But the job loss in country centres would have been greater, he said. "People in country towns and cities, whose employment would have been affected either directly or indirectly, would have run into many hundreds," he said. [Canberra THE AUSTRALIAN in English 8 Jul 82 p 36]

SATELLITE TV FROM U.S.--WASHINGTON, Wed--Australians will soon be able to watch the best of America's television programmes beamed direct by satellite. Under an agreement between a U.S. Satellite communications company and Australia's Seven television network, news, feature programmes and cable television will be transmitted to Sydney 24 hours a day. The Communications Satellite Corporation (Comsat) said that the Seven network building would build a Los Angeles studio as part of the satellite service. According to a Comsat statement, the agreement provides for U.S. programmes to be transmitted from an earth station in Santa Paula, California, to a spare Pacific Ocean region satellite owned by the International Telecommunications Satellite Organisation (Intelsat). "The satellite, located in geo-stationary oribit 35,000km in space, will transmit the signal directly to an earth station near Sydney, and from there it will be sent to Channel Seven's broadcast centre," the statement said. The service is scheduled to start within about seven months after approval by the Federal Communications Commission. A spokesman for TVW-7 in Perth said that the station was an independent company and not party to the agreement. It might be approached later to join the service, he said. [Perth THE WEST AUSTRALIAN in English 8 Jul 82 p 36]

CSO: 5500/7557

CNIE PRESIDENT ON STUDY, DESIGN OF DOMESTIC SATELLITE

Buenos Aires AEROSPACIO in English Jan-Feb 82 pp 24-31

[Article by Miguel Sanchez Pena, brigadier general, retired; president of the National Commission for Space Research]

[Excerpt] In Argentina, the responsible national agency--CNIE--joined efforts with universities and other institutes in order to undertake, as from 1962, some experiments with two types of space platforms: sounding-rockets and stratospheric balloons, each one offering both advantages and disadvantages. To evaluate these tasks the following factors must be taken into account: duration of the measurements, --days, hours, minutes--, data repetition, command and control of the space area where the measurements take place, costs and other parameters.

As from that date, using those space platforms, experiments in aeronomy, ionosphere, astronomy, meteorology, radio-propagation, remote sensors, photography, etc., were carried out from Chamical, Mar Chiquita, Parana, Mendoza, Chaco, in the Continent; from the Matienzo and Vicecomodoro Marambio Antarctic Air Force Bases and from the Punta Lobos Base, near Lima, peru, where the Castor Peru test took place. All this gave rise to the development of an infrastructure, a consciousness, as well as the human resources, which prompted the consideration of a space satellite platform.

Today the activities which relate space techniques to their effects and results have been fully realized and incorporated to nations' common patrimony, even in developing countries. Our country was no exception to the world-wide interest awakened by this type of research, and from the beginning CNIE envisaged the project of an Argentine satellite. Circumstances did not always propitiate the rapid advances contemplated by CNIE, but ever-renewed enthusiasm helped to keep hopes alive until it became possible to materialize the envisaged plans.

The tasks developed by CNIE since its creation, and the projects implemented thanks to the persistent arduous work of its technicians, have led this Organiism to speed up the study of the design of a domestic satellite, which has been recently assigned on an encouraging priority. The mere presentation of a project is not enough for it to be carried out; the scientists' decision must be closely supported; furthermore, it should always be preceded by a political decision that shall make it possible for the economic-financial area to support the implementation of the project. In this sense there are still some steps to be taken which demand deep consideration since once the program is started it must not be interrupted until its completion. Through CNIE, the Air Force has already defined its views about the outline of the project and its continuity. It is now mandatory to coordinate the different factors and agencies which must necessarily participate in this enterprise which commits the reputation of our space agency. CNIE is conscious of how essential a steady scientific development is, since stopping means going backwards. For that reason, the priority assigned to the satellite project finds its justification therein.

CNIE considers that the attainment of an executive capability in the artificial satellite field is of the same character as that of other technologies; in the long run, they are assets subject to trade dealings which end by affecting the balance of trade of the states forced to resort to foreign aid. We realize that we cannot do without imported learning, but we are also conscious that our country is in a position which enables us to reduce this requirement, since we have useful knowledge available for this project. The problem is to ascertain first our creative skills and the technologies we master and next, the complementary need for importation.

The shaping of a scientific and technical infrastructure, as well as the development of human resources, calls for a costly and lengthy task measured in terms of years of important investments and hard updating work. The experiments already mentioned, the post-graduate courses organized in Argentina, the assistance of foreign experts who delivered them, the training timate national aims and capacities which shall be conveniently supported by intellectual and material resources arising from the requirements derived. Mutual interaction of those factors will unavoidably encourage the growth of existing means as well as reinforce them with new ones.

The satellite development program does not pertain to CNIE exclusively, but its leadership is unquestionable. It also concerns a number of national agencies which need information that can only be obtained using those space means. Thus, the coordination already established with the Subsecretaria de Ciencia y Tecnologia (SUBCYT), the Programa Nacional de Radiopropagacion (PRONARP) and the Instituto de Astronomia y Fisica del Espacio (IAFE) has resulted in the formulation of an interdisciplinary goal ratified by signing an agreement to implement the project in successive stages. The SUBCYT, acting as sponsor, and the other two institutions have coordinated with CNIE the development of a scientific satellite. Its first experimental prototype, denominated SAC-1 PE, will make it possible to collect space information applicable to practical technologies that nowadays are beyond our reach and which generate a series of subjections and restrictions of dubious solution. The structuralization of the methodology to be followed undergone in developed countries and the work in concurrent disciplines, undertaken by CNIE and other associate institutions, make up the basis which must be continuously enlarged in quantity and quality. The planning out of a well thought out program with long, medium and short term goals is an imperative. This should start with the acquisition of immediate theoretical knowledge and conclude with its implementation and the exploitation of the results obtained.

Thus, CNIE has outlined a plan for initial action to meet the general purposes of any scientific-technological program. To begin with, a solid structure based upon the so-called satellite sciences and techniques was shaped, suited to ul- by the project throughout its development completes by this agreement.

The importance of the fundamental step we intend to take in the field of space research transcends its mere scientific and technical expression. The possibility of having a complex system of our own in space even though the date has not been defined yet, has a political sense whose consequences cannot be ignored. Nowadays there are few countries possessing that capability and some even depend on third parties as regards the carrier, the satellite platform or both the main elements, thus establishing different ways of dependence which is not our purpose to evaluate right now.

These considerations alert us about the imperative need to determine, in advance, the characteristics of the launcher and the satellite vehicle, as well as the practical goals of the system to be designed. In the Argentine instance, which is no different from similar ones, both PRONARP and IAFE have already detailed the minimum requirements for the design of the orbital element and its sensors. The Radiopropagation national agency has proposed research on the magnetospheric and aeronomic processes participating in energy decay and the propagation of disturbances from high latitudes towards the Equatorial region. The data to be collected will enable a better understanding of the general dynamics of the atmosphere, specially that of our hemisphere. At the same time said agency envisages the study of the conditions of transionospheric radio propagation of HF signals and in the lower VHF, as well as the effect of magnetospheric-aeronomic disturbances on them. These purposes will materialize by using the following techniques: high temporal resolution of neutral and ionic composition, precipitation particles spectra and high precision in the geomagnetic field at satellite altitude. The information thus obtained through the satellite would be complemented with data to be collected at ground stations set up throughout our territory and some subcontinental countries. The satellite is also expected to transmit beacon signals to ground stations as well as to receive HF emissions from them.

IAFE intends to perform the study of the energy gamma radiation spectrum ranging from some hundreds of KeV to about 8 MeV, which can be observed during some solar flares. This work is associated to the acceleration of protons, other nuclei and electrons up to very high energy during flares and their interaction with nuclei species of the solar atmosphere. For that purpose the main experiment is to include a system of actively collimated inorganic scintillators, and spectra will be obtained with a 128-channel resolution within the range considered on variable integration times. The neutrons will be detected by a plastic scintillator and distinguished from gamma radiation by their temporal behiavor. The auxiliary experiment is devoted to the observation of the emission of hard X-radiation up to around 200 keV, with low spectral resolution, whereas continuous monitoring will also provide a measurement of the incidence of ionizing radiation on the ionosphere during flares.

The capability to develop this cycle of experiments will give rise to a series of invaluable benefits for our scientists. They will be able to obtain the desired data at the right time and without restrictions, as a direct result of the operation of a domestic satellite. The concordance thus achieved would automatically place us in a preferential situation to develop new work and programs with a national criterion, while our researchers would be able to continue research at a much higher level than the usually attained under the dependence on third parties. It is important to adjust the scientific mission to the national reality, avoiding all kind of appealing digressions which appear in unknown fields, The preliminary specifications already outlined fully respond to that sound concept because they are within today's technical feasibilities. However, the configuration of a satellite system with specific purposes is not simple, and requires that many points be accurately defined.

Any design to be proposed must be oriented to a reasonably close launching date and, in order to achieve a satisfactory economy, common elements must be considered which will enable the subsequent evoluation towards a satellite family. This idea could be efficiently developed if the service module and the payload are prepared with a view to fulfilling the longer term objective. Nevertheless, any design to be finally approved shall be highly reliable and have a long service life, a minimum orbital mass and low consumption.

Another aspect to have in mind in the design is that the engineering of the space segment must be capable of enabling maximum technological transference, so as to promote a growing national integration. These design criteria must conform to certain patterns of configuration and dimensions of the system, to the time required by the study and implementation stages and to operation reliability.

With relation to the first point, the experience already acquired by CNIE in system research and development finds a fruitful application field in the satellite project. The use of the expertise acquired by our institution in the last twenty years offers the option to begin with a modest structure for the space and ground segments, without detriment to its behavior as an operational system. That is why the basic satellite must be small in order to be launched by means of an inexpensive vector of the Scout types. The orbit planned for that first satellites should be low, quasi polar, but envisaging a maximum possible coverage of the national territory; this determination will enable the tracking subsystem to reduce its size and complexity. As regards the ground segment, it should be integrated by a standardized tracking, telemetry and command station, compatible with NASA unified S-band and by a data acquisition and processing station adapted to current CNIE installations.

The time required to put such satellite system in operation will depend on the time required for developing and testing it; but anyhow it will have to be short enough for the project not to become unattainable or be set aside. No matter how carefully planned and minutely implemented the system design needs to be, we understand that the completion of the project cannot take longer than eight years as a maximum allowable limit. In order that the search for system reliability do not affect the development time, the use of space well-proven components is advisable, at least during the first stage of the satellite system. In those vehicles the duplication of equipment and systems give origin to strong overloads on the whole, and therefore it is convenient to increase correct operations probabilities by reducing the mobile parts.

To propose a theoretical concept is an intellectual work requiring a great deal of creative and analytical effort; but the practical achievement of an expectation requires confidence in the design, continuity in the undertaking, decision and lasting enthusiasm. The national satellite project needs all that, and we believe that its materialization will find well-prepared ways to face the commitment that the whole country will assume when the proper political decision gives the starting signal to those responsible for turning the project into a gratifying reality.

In a general way, the total process for achieving this objective has been divided in four principal stages, with definite goals to be attained at the end of each stage. For example, the first stage--of a conceptual and exploratory order--will conclude with the selection and appointment of the main contractor. Within that stage, the availability of appropriate technologies, the feasibility of schematic designs, the tentative program and the outline of the proposed project will be analized. The answer to these analysis will generally define the system as a function of programs, costs and basic characteristics, as well as the forecast for probable development.

Once all the proposals have been submitted the period for concept materialization will begin among manufacturers who are willing to present their own particular solutions; this period will finish with the selection of the contractor as a result of the interaction of tasks concurrent with the process itself. It may not be an exaggeration to say that this might be the most difficult stage, because the decisions to be made will only be probabilistic and elaborated with techniques of difficult simulation and formulation.

The second stage--development--will be completed with the decision to begin production, but it might be advanced for extraordinary reasons such as the delivery program and the availability of launcher at a given time. Throughout the implementation period, the projected product will become a finished and certified product, but it will not be exempted from undergoing changes while the definition of the system and sub-systems and the certification tests are made. The acceptance of the definition is generally a technical stage in which the compliance with the specifications is controlled before deciding on the continuation or modification of the system.

In the third stage--production--the emphasis will be concentrated on aspects other than the technical ones governing previous phases. It will cover certification of the first production element, and efforts will be directed to other areas, such as the financial one, which often conditions the continuity of the project. Unless important changes are intended to be made on the project--which is unlikely during this phase due to the advanced state of development--decisions to be taken will be considerably less complex than previous ones.

Any attempt to change the project under execution may involve the risk of adding a fourth phase to the satellite system design--post-development--because of the need to adopt a complementary action program. For instance, a wish to reduce production costs would probably give raise to the wish to improve performances and the initial version of the product, a fact which would bring about new analyses--though briefer--of previous stages.

It is convenient that a process of permanent feedback exist that may introduce new technologies and materials already tested to simplify the construction of payloads, the satellite platform and the ground segment. But it must not be forgotten that decisions made during the conception, design and materialization stages have to keep certain stability in order to attain the main objective in a precise term.

Summarizing, the national participation in space research and in the exploitation of results may be carried out in two ways: the total dependence on other states which provide basic information according to their own interests, and the effort undertaken on a domestic basis which does noot exclude foreign cooperation and technological support freely negotiaated.

CNIE has a long experinece in this subject where it has chosen the second way with great success. The project of an Argentine satellite modestly confirms that once again and at the right moment, we will attend the launching of an unprecedented program in our country which will obviously increasee our prestige in the international community.

CSO: 5500/2323

BRIEFS

INTERNATIONAL MICROWAVE NETWORK--Work on the construction of a microwave network to link Zambia, Zimbabwe and Botswana has started. Norwegian vice-consul, assistant representative in Zambia, (Isak Helseg), has said that the construction of the infrastructures, like towers and roads of the microwave network to link the three countries, started early this year in Zimbabwe and Botswana. An agreement paving the way for the implementation of the microwave network to link Zambia, Zimbabwe and Botswana was signed in April this year by Norway and Sweden, who are undertaking the construction work on one hand, and the three governments on the other. Mr (Helseg) said that work on the construction of the microwave network was going on according to plan, and that it was expected to be completed in March 1984. [Text] [MB19C514 Lusaka Domestic Service in English 1800 GMT 11 Aug 82]

CSO: 5500/5890

IVORY COAST

BRIEFS

NEW LINES SLATED--The African Development Bank (ADB) has approved a loan of 10 million units of account (or Fr CFA 3,473,960,000) to our country to finance the Plateau III telecommunications project. The project is designed to improve the quality of telephone services and to fully satisfy demand for telephone services in the region extending from the Plateau to Abidjan by creating a new, 10,000-line electronic telephone exchange. This investment is deemed sufficient to meet demand for a number of years. The project will also facilitate completion and improvement of the local distribution network by means of cables in the Plateau region known as Plateau III. The project includes: creation of a 10,000-line telephone exchange; completion of a local distribution network by means of cables; provision of 10,000 telephone units; building up a supply of spare parts and acquisition of testing equipment and various tools. The loan, which was signed yesterday morning by Abdoulaye Kone, the minister for economic and financial affairs, and Donatien Bihute, acting president of the ADB, is to be paid back over 15 years, including a 5-year grace period. [Text] [Abidjan FRATERNITE MATIN in French 29 Jun 82 p 1] 9516

CSO: 5500/5863

BRIEFS

MICROWAVE NETWORK INAUGURATED--Tomorrow, 26 June, is the eighth anniversary of the revolution, but also the 22d anniversary of independence. The Democratic Republic of Madagascar celebrates this event in full recognition of the numerous great achievements that have been realized. The most recent, the "microwave line for southern Madagascar, the most modern in Africa and O.I. [Indian Ocean]," was inaugurated yesterday at Mananjary by PRESIDENT Didier Ratsiraka, who took the opportunity to give special thanks to France, not only because of the part it played in making this project a reality through CCCE [Central Fund for Economic Cooperation], FAC [Aid and Cooperation Fund], and COFACE [French Insurance Company for Foreign Trade], as well as the CSF-Thomson Company, but also because Mitterrand's France is helping us in every field of endeavor, and more recently has played a substantial part in the aid the "friends of Madagascar" have decided to provide. The Fianar-East Coast-Tolagnoro-Toliara microwave line cost 6 billion Malagasy francs. It is a fine project, providing the region with television live from Tana (an example of successful decentralization) and also making it possible for people to communicate better, thanks to several hundred telephone or radio networks. [Excerpt] [Tananarive MADAGASCAR MATIN in French 25 Jun 82 pp 1, 6] 9516

CSO: 5500/5863

NEGOTIATIONS FOR BOPHUTHATSWANA TV STATION REPORTED

Johannesburg THE STAR in English 27 Jul 72 p 9

[Article by Jaap Boekkooi: "'Outside' TV on its Beam Ends"]

[Text]

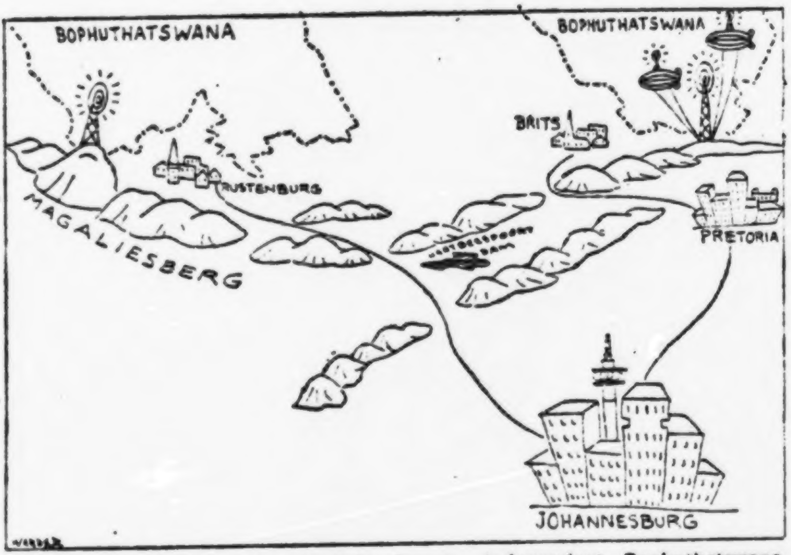
The big issue to be negotiated before an independent Bophuthatswana television station can start beaming to the Rand is a high transmission site, presumably in the Magaliesberg.

This is one of the reasons why negotiations between the governments in Mmabatho and Pretoria are delicate.

It is believed that all feasibility studies made for the Bophuthatswana Government on the question of beaming a commercial television service to the lucrative Pretoria-Witwatersrand market have had negative results.

This is because Bophuthatswana does not have any high ground from which transmissions could be made.

Schemes to transmit from a 700 m concrete tower at Garankuwa, which would be the tallest in the southern hemisphere, or from blimps anchored to the ground, have been found impracticable.



The scene showing the struggle for an independent Bophuthatswana television service. After studies showed that transmissions from a 700 m tower at Garankuwa, or a blimp (airship — right top) were too costly, impracticable and dangerous to aircraft, the Tswana state now opts for a mountain-top site to beam its TV to the Rand and Pretoria. One high mountain adjoins Bophuthatswana west of Rustenburg, a possible site for a large transmission mast.

The concrete mast would cost R30 million to build today, a steel mast would be crushed by its own weight, and blimp transmission beams would be off target if the airship moved in high winds. These systems would also interfere with aviation.

Since then Bophuthatswana has been eyeing a mountain site on its borders. This can only be in the Magaliesberg.

A site here, to be bought from, or exchanged with the South African Government, would enable a Bophuthatswana TV station to beam its own programmes to Pretoria, most of Johannesburg and the East and West Rand.

Before independence in 1977 Bophuthatswana contained land on the Magaliesberg. But this fell away during further land consolidation negotiations with Pretoria.

In return for a Magaliesberg mountain site, Pretoria may set conditions.

The South African Government has many aces up its sleeve:

- Bophuthatswana can obtain a TV frequency only through the Post Office, which is the regulating authority of frequencey allocations in Southern Africa.
- South Africa has the power to grant or withhold relay and satellite facilities.
- Since the South African authorities can, through the Bureau of Standards, regulate the number of TV aerials on one roof, they could stop viewers installing second aerials to receive Bophuthatswana.
- The South African Government could demand control of programmes if the station hopes to attract more viewers with less-censored programmes.

CSO: 5500/5889

BRIEFS

R&D EXPENDITURE--SOUTH Africa's expenditure on research and development was 0,2% of the world total, Dr C F Garbers, the president of the Council for Scientific and Industrial Research, said in Pretoria yesterday. Opening the 13th International Symposium on the Chemistry of Natural Products, he said that in the year 1979-80 world spending on research and development exceeded R142 000-million. South Africa spent R345-million in the same period. However, small as it was, South Africa's effort was not insignificant, he added. In spite of limited investment in research and development, South Africa with a population made up of First World and Third World communities, was challenged by enormous problems. "At present 13 500 000 people are urbanised in a country where water is scarce and it is estimated that a further 20-million people will have to be urbanised, mostly in the northern parts of the country, before the turn of the century," Dr Garbers said. Large-scale industrialisation, creation of jobs, water reclamation and the providing of sufficient food could exert tremendous pressures on the country's fauna and flora, he said. Concerted efforts were needed to preserve the country's proud heritage for future generations. [Text] [Johannesburg RAND DAILY MAIL in English 3 Aug 82 p 2]

TERMS OF ELECTRONICS PROBE--AS forecast by Business Times last week, the Minister of Industry and Commerce, Dawie de Villiers, has launched an investigation into the electronics industry. According to the Minister: "The Board of Trade is to undertake with the assistance of experts from the industry a broad investigation into the elctronics industry and to make recommendations in regard to: --The development potential of the electronics industry. --The question whether the electronics industry, or specific sections thereof, should be encouraged, bearing in mind the net potential contribution of the industry to the economy, and, should this be desirable, what the form of such encouragement should be. --The creation of possible structures or bodies to implement any such recommendations of the Board of Trade and Industries with a view to promoting the development of the electronics industry." [Text] [Johannesburg SUNDAY TIMES-BUSINESS TIMES in English 1 Aug 82 p 3]

CSO: 5500/5888

BRIEFS

FRANCE TO PROVIDE TRANSMITTER--The Kinshasa television transmitting station will be functioning again very soon. A 10 kilowatt transmitter will soon be installed. A sum of Fr 5.5 million will be released for this under an agreement signed between the executive council and the French Government. This is one of the three financial agreements involving a sum of Fr 10 million to be granted to Zaire for the implementation of a number of projects within the framework of bilateral cooperation. The second agreement provides for an aid of Fr 3.5 million to be used in equipping workshops, training personnel and providing technical assistance at the Industrial Technical Institute at Maluku and in Kinshasa. The third agreement involves a sum of Fr 1 million which will be given to the planning unit of the Ministry of Agriculture, rural development and environment. [Text] [AB191247 Kinshasa Domestic Service in French 1130 GMT 19 Aug 82]

CSO: 5500/5892

BRIEFS

DIRECT TV--The Media Policy Committee, gathering experts from the 21 member-countries of the Council of Europe, met in Paris on 26 May, under the chairmanship of Bernard Blin (TF1), to discuss problems involved in television by satellite. Papers were prepared by a working party composed of experts from Austria, Denmark, France, the FRG, Luxemburg, the Netherlands, Sweden, Switzerland and the United Kingdom. The group was received by the European Space Agency, the CNES [National Center for Space Studies], and the SNIAS [National Industrial Aerospace Company]. Technical data collected by the working party will provide the basis for the discussions by the Committee of 21 on problems such as the following: the impact of direct television by satellite on existing media structures and on spillover; advertising on television by satellite and the impact it could have on the advertising resources of the existing media (printed press, for example). This work received new impetus from a decision made by the foreign affairs ministers of the 21 member-countries of the Council of Europe at the end of April, following a proposal by the West German Government. The ministers felt that the Council of Europe offered an appropriate forum to work out a common approach to direct broadcast satellites. Next November, they will be receiving a report on the possibilities of solving these problems in Europea and on the legal instruments needed to implement the measures involved. [Text] [Paris AFP SCIENCES in French 27 May 82 p 16] 9805

CSO: 5500/2291

PLANS, OUTLAYS FOR SPACE SATELLITE PROGRAM

Frankfurt/Main FRANKFURTER ALLGEMEINE in German 15 Jul 82 p 4

[Text] Bonn, 14 July--According to Federal Research Minister Buelow, the fourth German space program approved on Wednesday by the Federal Cabinet is quite good in regard to its financial support and with a view to its chances for success. As for the level of German space research, so states the program, in an international scientific comparison it has the "status of equal partnership." A leading position has been achieved in solar research, as in other technical areas, through the special program "Helios" being carried out together with the United States. Von Buelow points out that the DM 3.9 billion foreseen for the program through 1986 is just about equal to the public expenditures for space travel in France and Japan, each of which plans to spend the equivalent of DM 1.1 billion annually.

The Federal Government puts the emphasis in its support of space technology on basic research and in the further improvement of proven satellite developments for communications and earth observation. The support measures by the Research Ministry are accompanied by the planned participation of the Federal Postal Administration in the development and construction of the television satellite with DM 70 million in each of the years 1984 and 1985. Buelow also praised the participation of the Federal Postal Administration in space projects in the case of a planned telecommunications satellite. The progress with satellites is also apparant from the fact that the FRG will take part in a program involving operational meteorological satellites of European weather services.

The new program attests that the German space industry appears to have achieved for itself a "leading position" in the case of radio satellites built in cooperation with France. The chances seem good for commercial export of complete satellite systems. The fundamental contractual prerequisites have now been created for the building of the German-French TV-satellites SAT and TDF (1985).

The European space laboratory Spacelab built with German cooperation is to be sent into space by means of the American Space Shuttle in 1983. Candidate astronauts are even being sought for the first Spacelab mission totally under German control planned for 1985.

9746
CSO: 5500/2305

PTT TO OPEN FIRST PROFESSIONAL TELEMATICS NETWORK

Paris ELECTRONIQUE ACTUALITES in French 11 Jun 82 pp 1, 8

[Article by D. Levy: "PTT Opening Professional TELETEL Service in October"]

[Text] It is under way! Beginning this October, professional telematics becomes operational throughout the country. PTT has just announced the terms and conditions that will govern the marketing of this professional "Teletel" service, which will involve two types of facilities: "Minitel" terminals and the Teletel access network to videotex transmission centers; the network will have 1,000 Videopad-type ports by the end of this year.

Professional demand appears to be very strong, since PTT is planning to provide some 20,000 terminals to some 100 enterprises during the fourth quarter of 1982, amid projections of 80,000 to 100,000 installed Minitel terminals by the end of 1983. Beginning in 1984, the Teletel network will be improved through the putting in place of videotex access points that will accept "Architel" protocols.

In addition to "general-public" telematics service, tested by way of the Velizy experimental setup, and "group" telematics service, put into operation mainly at Nantes and Grenoble, there is now to be also a "professional" telematics service, which is of special interest to banks and financial establishments, the press and publishing houses, farming and large industrial and commercial enterprises (including the automobile sector).

Attesting this interest was the meeting of some 400 persons in Paris on 28 May for a briefing on terms and conditions under which PTT will make professional Teletel service available. The meeting enabled telematics officials of the DGT [General Directorate for Telecommunications] to announce the opening of the access network to Teletel, to explain in detail the applicable terms, conditions and tariffs, as well as those applicable to the lease of Minitel terminals. The purpose of this briefing was to enable the interested enterprises and administrations to plan their investments taking into account the availability of a professional telematics service.

Advent of 'Architel'

The opening of professional Teletel service this October will be made possible by the putting in place of an interim network of Telesystemes TSL 230 concentrators. The DGT has ordered some 100 units of this type, the installation of which will be echeloned over a period of 6 months beginning this September. By the end of this year, some 40 Teletel access points to Transpac will cover the major French economic regions, making available to users of the service 1,000 access ports (each concentrator has a capacity of 24 channels). This interim Teletel network, based on Videopad-type access points and compatible with X-29 protocol, will be supplemented by the upgrading of some 50 other concentrators that are currently in place. This upgrading, which will consist of adding new functions such as remote program loading, etc) will be done by Telesystemes.

The first public Teletel network will thus have, during the first quarter of 1983, 150 concentrators covering the entire country. PTT has assured its future clients that the service being offered via these Videopad access points will continue in operation at least until 1985-1986. Beginning in 1984, however, this interim network will be supplemented by videotex access points that will be more "accommodating," in that it will then be possible to use "Architel" protocols.

Architel responds to the DGT's concern with interfacing. The networks currently in place for the Ile-et-Vilaine electronic telephone directory, the Velizy experimental setup and the Videopad access points, all use different architectures. The DGT's aim is to merge these three networks. Architel protocols (7 levels) will be extended gradually to cover all telematics services, in conformity at all times with the work being done on standardization by the CCITT [International Consultative Committee for Telephone and Telegraph] and the ISO [International Standards Organization]. Detailed information has just been released by the DGT on videotex access points, making Architel operational.

Thus, beginning in October, the subscriber to professional Teletel service will be able to access the network by paying a basic charge for the telephonic connection between his Minitel terminal and the Teletel access point, regardless of duration of the call and the distance from the access point. The beneficiary of the service, for his part, will be charged for the cost of the communication over Transpac at a fixed rate (regardless of the distance between the Teletel access point to Transpac and the transmission center) of 6.6 centimes per K-byte (the equivalent of a full screen) and 14 centimes per minute (1.1 centime at the promotional tariff in effect until March 1983).

As regards Minitel terminals, users will be able to procure them either from the PTT--which, for the time being, will market only the Telic basic version at 70 francs per month at all Telecom sales offices and all Teleboutiques--or directly from the manufacturers (who will offer a range of models). It is recalled that, in those regions where the electronic telephone directory will be installed, the cost of the Minitel terminal is included in the normal charge for the telephonic service involved.

9238
CSO: 5500/2296

CONSULTATION WITH OTHER NATIONS EXPECTED BEFORE UIT CONFERENCE

Paris REVUE FRANCAISE DE TELECOMMUNICATIONS in French Apr 82 pp 23-24

[Article: "International Cooperation"]

[Excerpts] "Telecommunications knows no national borders." What today seems so obvious took more than a century to become so and only at the price of a constant effort at bringing into harmony the customs and interests of all nations. Today, the growth of trade and the continuing advent of new techniques render more essential than ever the role of the international telecommunications organizations, one of the leading ones among them being the UIT [International Telecommunications Union]. France takes an active part in it.

As a founding member, France participates in this organization at all levels. Jean-Paul Duplan, assistant head of the French PTT's Directorate of International Affairs, makes an emphatic point of this: "French experts attend all UIT meetings, no matter what the subject may be: telephony, telegraphy, radio, telematics and new services; a Frenchman is one of the 36 members of its Board of Directors; and a number of our compatriots are on the UIT's permanent staff, although, for the past several years, they have tended to cede positions to the nationals of lesser developed countries."

France also participates from the financial standpoint: In 1981, France contributed 11 million francs, or 7 percent of the organization's funding for that year, a contribution equal to that of the United States and to that of the Soviet Union. Its contribution, like that of the other member countries, will be even higher in 1982.

The next plenipotentiary meeting will be held at Nairobi, Kenya, from 28 September to 5 November 1982. This could provide an opportunity to once again modify the Convention, taking into account the recent evolution of needs and of techniques. In this regard, France expects to consult with other nations, particularly in Europe, before deciding what its position will be. Be that as it may, all indications are that the Nairobi meeting will increase the domain of the UIT's activities.

In particular, the Conference could decide to integrate into the UIT's budget the expenses incurred under the heading of technical cooperation with the lesser developed countries; at present, this task is accomplished under the UN Program for Development. According to Francis Thabard, French PTT director of industrial and international affairs, certain nations would very much like to bring about major changes in the UIT's financial administration and operations. "But," he adds, "what is important to us is that our country act in concert with its European partners. Our aim is to make of the UIT as effective an instrument as possible and capable of receiving the backing of a maximum number of nations."

Actually, it is very difficult, in an international body, to bring about a unity of viewpoints; for, the problems of the lesser developed countries are very different from those that have to be met by the "richer" nations. Whereas the latter seek to work on the definition of standards for the new technologies, the former are interested above all in economic solutions that are immediately applicable to their networks. For example, it is not a rare thing for the choice of a switching technique to be made on the basis of apparent ease of implementation rather than on one of modernness or of better practice.

Be that as it may, it is essential that the member nations be able to make their voices heard despite the handicap that a lack of money and of qualified personnel represents for most of them. It is equally essential (and France sees to it) that the aid given them not be limited to the drawing up of projects and reports.

Regarding Common Standards

The UIT's other fundamental task, at the present time, is the putting in place of common standards for telecommunications components and equipment. To this end, France maintains constant contact with the specialized committees of the UIT: The CCITT [International Consultative Committee for Telephone and Telegraph] and the its analog for radio, the CCIR [International Consultative Committee for Radio]. Says Francis Thabard: "We must eliminate the obstacles that prevent computers from talking to each other and machines from working together as efficiently as possible."

Telematics is actually advancing so rapidly that one sees appearing on the market equipment of many types whose specifications are incompatible. Certain manufacturers hope in this way to create a "captive" clientele they can tie to their own standards. In the interest of the users as well as that of industry, France intends to prevent such a fragmentation of the market.

The case of videotex is a good illustration of the difficulties stemming from too rapid a mushrooming of new techniques. In "Little Europe" alone, three different countries have developed their respective systems: The FRG (Bildschirmtext), France (Teletel/Antiope) and Great Britain (Prestel). "We could have found ourselves," says Francis Thabard, "in a situation analogous to the imbroglio produced a few years ago by the rivalry between color television systems, a situation that ended in the retention of a French "Secam" and a German "Pal, neither of them compatible with the other. The members of the UIT are determined to avoid a repetition of such mistakes."

France's efforts are aimed now at achieving a compromise between Europe and North America. AT&T has just published specifications for a videotex system common to the United States and Canada. It would be desirable that this "American-style" videotex become compatible with European systems, which are less perfected but also less costly."

The UIT has undertaken to address this problem, the urgency of which it acknowledges. The definition of new standards, however, always takes time, since they must also be made compatible with existing standards while taking into account of future evolutions that are likely to occur: A compromise must be found between innovation and standardization. It is also necessary that enterprises recognize the importance to their own interests of achieving general understanding.

To convince oneself of this, one need only observe the attitude of the manufacturers of videocassettes, whose sales are being seriously hampered by a lack of agreement among them on standards... This is why France is carrying on a campaign in the international forums for abandonment of "feudal" attitudes and the adoption of international specifications, which would be advantageous to all.

9399
CSO: 5500/2297

NEW REPORT ON TRANSBORDER DATA FLOW PUBLISHED

Paris ZERO UN INFORMATIQUE HEBDO in French 14 Jun 82 p 2

[Article by Jean Porracchia: "Published by Documentation Francaise: Transborder Data Flow"]

[Text] Since time immemorial, human beings have carried on international exchanges of information without it having the least bit perturbed anyone. Today, governments and administrations, enterprises and associations, and physical persons exchange daily hundreds of thousands of letters, telex messages, telephine calls, newspapers and books, television and radio broadcasts, movies, and microfiche, which cross national boundaries. The commonplaceness of telecommunications networks today is introducing a real change in the nature of relations between nations, especially since it is at the same time contributing to a substantial growth in the realm of intellectual activities. The products thus being exchanged, taken as a whole, are categorized under the general heading of information or "data."

In November 1978, the government appointed a commission to study the problems posed by "incorporeal" exchanges. The report submitted by the chairman of this commission, in July 1980, has just been published under the title "The Transborder Data Flow: Towards an International Economics of Data?"*

The lack of knowledge concerning the transborder flows of data--as regards their extent and nature--is all the more perturbing in that it signifies a lack of control over them. All that is known is that they are growing at an exponential rate.

The number of specialized telecommunications links as of 1969 totaled some 30,000 as compared to over 121,000 in 1978. The growth of transborder exchanges of intangible assets--still according to the "Madec Report"--has been at four times the rate of that of material assets since the start of the century.

Risk of Blockade

What kinds of assets are being sold or ceded, to whom, where and at what price? Neither the nation's general accounting system, nor the balance of payments, nor customs nor internal revenue statistics are able to provide an answer to these questions. This neglect is giving rise to concern, even though it is clear that transborder fluxes are benefiting and will continue to benefit considerably the world collectivity.

---

* The "Computerization and Society" Series published by Documentation Francaise.

In the domain of cooperation with respect to exchanges of scientific information, what would be the future of a nation were it to isolate itself from the potential of foreign innovation?

In the face of the ongoing globalization of firms, any embargo or blockading of data fluxes would moreover constitute an act of economic war.

Lastly, and above all, the free communication of messages and opinions is essential from the standpoint of democracy, on pain of infringement upon the freedoms of expression and of circulation of information.

On the other hand, however, there is no denying the risks being generated by the rapid growth of international data flows.

The author of this report cites the principal ones:

--Illegal use of the data being transferred abroad, which could seriously affect the freedom of citizens, their right to privacy in the conduct of their lives, the probity of transactions or the security of the state;

--Social vulnerability: Were there to occur a failure on a "telematics network" (interruption of flows, processing stoppage, alteration of files or of software), a natural catastrophe or sabotage, a state that had transferred data abroad would find itself deprived of all proof of sovereignty over it. The thought follows that "data havens" identical to "tax havens" could easily be set up; it would take no more than the addition of a few supplementary bytes of memory... ;

--The threats to cultural identity that could emanate from dominant positions and "dumping" practices in the "culture industries," involving data banks and publishing;

--Another danger: The subsidiaries of multinationals are generally considered to be subject to the juridical order of the host country, but also to that of their head office. Does it not follow that encroachments on foreign norms can reasonably be expected to occur in the application of laws outside their geographic jurisdiction?

--If specialization of production and globalization of markets were to continue increasing with the growth in telematics networks, would the multinational systems not extend their ascendancy over states (considering that, today, remote data processing can be used to create Eurodollars anywhere at all, by way of any computer whatever in any corner of the world whatever).

A Juridical Base

Based on these considerations, the "Madec Report" argues that France should strengthen its control over the telematics network, promote source-data-productive industries and develop understandings with the enterprises regarding their internal computerization procedures, and lastly, create a juridical infrastructure to underlie its data economy, a topic to which Pierre Leclerq, doctor of laws, devotes a chapter titled "Essay on the Juridical Status of Data" in this book.

[Boxed insert]:

Whereas the Law of 11 March 1977 authorizes under paragraphs 2 and 3 of Article 4f, on the one hand only "copies or reproductions strictly limited to private use and not intended for collective use," and on the other hand only analyses and brief citations for purposes of examples or illustration, "any representation or reproduction integrally or in part made without the consent of the author or of his or her beneficiaries or assignees, trustees or executors is unlawful (paragraph 1 of Article 40), and such representation or reproduction, by any method whatever, shall constitute an infringement punishable under Articles 425 et seqq. of the penal code.

9399
CSO: 5500/2297

INTEGRATED SERVICE TELETEL GIVES EVALUATION OF PROGRAM

Paris REVUE FRANCAISE DES TELECOMMUNICATIONS in French Apr 82 pp 47-49

[Article: "Teletel 3V: Initial Evaluation"]

[Excerpt] Inaugurated on 9 July 1981, the 3V (Velizy-Versailles-Val de Bievre) experiment lets 2,200 volunteer households "dialogue" with a number of services: Some services provide daily news, others a reservations-at-home system, still others a guide to rights and how to obtain them, an electronic message service, games... Its aim is to test the "real-life" prospects for Teletel, a telematics facility for the general public. Planned initially for a duration of 18 months, it is now at the half-way mark and has undergone an initial evaluation...

One-Third of All Calls Are to the Press

As of the date of this first evaluation, several types of services are not yet in place, such as aided-teaching programs that have been specially developed by the Ministry of National Education, or at-home-transaction systems, or remote payment systems; for the latter, 300 credit-card readers that can be plugged into Teletel terminals will be installed for users between now and the end of 1982. The opening of such services could bring about a change in traffic patterns and distributions. This constraint should be borne in mind in reviewing the statistics of the first 9 months of this experiment.

Since the date in October 1981 when all the households in the "basic sample" were wired in, the use of Teletel has remained very stable. Each terminal sends, on average, two calls per week, of 13 to 15 minutes' average duration per call, involving three or four services; some 30 calls per month for services are thus originated by each terminal.

The programs offered by the press are more called for than any others by a very large margin (Table 1 [not given]): JOURNAL ELECTRONIQUE FRANCAIS alone, compiled jointly by the press organizations, gets between 15 and 20 percent of all calls, and the average duration of these calls is twice that of all calls; it includes--besides news--encyclopedic information, information of a practical nature and games.

The term "daily press" warrants clarification. It covers two very different "products," one received via hard copy and the other on the Teletel screen. A newspaper via video screen is obviously harder to skim through, as the viewer's eyes cannot skip from one article to another at will, and one cannot take one's terminal aboard a bus. The hard-copy daily, on the other hand, has no memory: It will not carry, for example, last year's legislative election results, or past gold price changes on the Paris Exchange; this type of historical data is provided by Teletel; also, PARISIEN LIBERE will offer at Velizy what it cannot provide in written form: Data banks on different sports and the full complement of advertisements by the National Federation of Real Estate Agents (over 15,000 ads under six classified headings).

Nor does the hard copy provide a means of accessing multiple listings for the same item of information. Illustrative in this regard is the case of the weekly PARIS-SCOPE, which compiles directly from its film recording tapes an electronic magazine that is managed and distributed by the Didot-Bottin transmission-center computer; identical to the hard-copy magazine as regards its content, the electronic PARIS-SCOPE provides, through a documentation-type software, an immediate listing of the movie houses showing Jacques Tati films, of those at which one can see one's favorite actor or actress, of those showing movies for minors, etc. Furthermore, it is capable of interpreting the user's request even though the latter may have a very personal notion "uv spelin" ["ortograf"].

Soon, Remote Payment

Second to the press, it is enterprises offering service-oriented information, especially schedules and timetables, that receive the next largest number of calls. This type of service responds to one of the principal expectations on the part of the public. According to a survey made prior to the installation of the terminals in the homes of the users, the latter were looking forward to five preferential domains of application for Teletel, heading which was the furnishing of service-oriented information and updates together with commercially-oriented programs (mail order,...); next, ahead of information of a practical or how-to nature, came "culture-" and leisure-oriented information.

In this regard, the service provided by the SCNF [French National Railroads] is among the most valued. By means of minicomputers serving as interfaces, Teletel users can access directly the SNCF's information processing system; they can in this way know the timetables of the trains linking some 2,000 stations and reserve accommodations on the basis of 14 different parameters (class, smoking or not, compartment car...). However, in the absence of a means of remote payment, tickets must still be picked up at a station or a travel agency.

The Stock Exchange and financial establishments garner more than 6 percent of the calls. They offer general information concerning their respective activities and their products, as well as services to customers: Status of accounts, orders for checkbooks, calculations on loan and financing operations. In addition, the French Post Office Bank and the Regional Discount and Deposit Bank, in association with other furnishers of videographics services, are studying the development of a system of electronic funds-transfers and remote payment by credit card.

The Statistical Sample

The Teletel 3V experiment has been evaluated by means of certain correlative surveys--traffic studies, and qualitative and quantitative studies based on polls taken--that will enable continued evaluation of the evolution of the attitude of households toward Teletel.

Distribution of Terminals by Class of Users:	Number
Basic sample	1,424
Other household installations	766
Total household installations	2,190
Schools	30
Providers of services or facilities	341
Promotional and technical	384
General total	2,945

Structure of Statistical Sample:	Percent
By Socio-Occupational Category of Family Head:	
--Industrial and professional	6
--Merchants and artisans	6
--Upper management	24.5
--Middle management	24
--White-collar workers	13.5
--Blue-collar workers	14
--Retirees	12

[continued on following page]

The Statistical Sample

[continued from preceding page]

By Age of Family Head:	Percent
--Less than 30 years of age	10.5
--30 to 39 years of age	33.5
--40 to 49 " " "	26.5
--50 to 59 " " "	17.5
--60 years and over	12

By Composition of Household:	
--Minors 12 to 14 years of age	22.3
--Minors less than 12 years of age	40.5
--No minors less than 15 years of age	37.2

Note: Minors, being generally less apprehensive toward innovation, frequently fulfill the role of initiators within their households.

Comparison of Traffic Among the Different User Categories

By Socio-Occupational Categories:

Category	Number of Calls per Month		Index	
	October	January	October	January
Industrial and Professional	23	30	80	86
Merchants and Artisans	32	40	112	114
Engineers and upper management	35	39	122	112
Middle management	27	48	92	138
White-collar workers	37	39	129	112
Blue-collar workers	27	31	94	89
Retirees	19	17	68	49
			100	100

By Age Categories of Minors in Household:

Category	Number of Calls per Month		Index	
	October	January	October	January
Minors 2 to 14 years of age	42	48	135	123
Minors less than 12 years only	31	38	97	97
No minors of less [as published]	22	31	69	79
			100	100

Together with the SNCF, the mail-order firms are among the most interested in such a system. To date, they have been communicating with purchasers essentially by mail or telephone. Teletel expands substantially the possibilities of dialogue. For example, the CAMIF, a purchasing center for members of the teaching profession, offers: A merchandise ordering service, announcements of bargain and clearance sales on merchandise, monographs on products and their use, servicing of customer accounts, credit information. The furnishers of this type of information are for the most part interested in putting in place an order-taking system. It should be noted, however, that the setting up of a true dialogue system requires in-depth studies on a larger sampling than the one represented by the users of the 3V experimental setup.

A Very 'Convivial' Mailbox

While some of the enterprises involved in the experiment try diligently to exploit to the maximum the possibilities inherent in videographics, others seem to be content to "be there for the sake of being there" and not to consider Teletel as other than a sophisticated advertising gimmick. According to one user, "Certain services, after a pompously worded introduction, proceed to a display of dead-end information totally devoid of interest; others announce a forthcoming tombola for the 25th of the month that has already taken place on the 10th... These services do nothing but harm to the system as a whole." The project staff displays more optimism, saying "The bad programs will be their own undoing. Those that evolve the most and offer the best possibilities of dialogue will be the ones who receive the most calls."

The fact is that the most animate information is not being provided by any enterprise or collectivity, but rather by the users. By means of an "electronic mailbox" service, the latter can receive messages and address messages to one or more addressees at a time. As soon as they are plugged into Teletel, the Velizy information center advises them whether any "mail" has arrived for them since their last time they checked their "mailbox." After they have agreed to identify their terminal to the center and given it their password, they will see displayed on their screen the messages that have arrived from their suppliers, the PTT or other users. These messages can even be in "postcard" form, that is, text accompanied by a drawing that may be selected from a catalog of drawings ranging from an anniversary cake to a snow-covered mountain.

As of now, this message service, with 450 calls a day, is receiving 15 percent of all calls, although 40 percent of the users of Teletel have not bothered to subscribe to this service: Evidently, although Velizy is far from being a suburban dormitory town, many of its inhabitants know too few Teletel users to feel the need to subscribe to electronic mail delivery service. The 3V project staff deems that, as in the case of the telephone at its inception, the traffic of this service should grow in proportion to the square of the number of subscribers.

Mr Cayazzo, president of the AAT 3V [Teletel Subscribers Association] is particularly pleased with electronic mailbox service: "Whether it be matter of announcing a meeting or of finding, say, a fourth for bridge, it is conducive to the development of associations of all kinds, relieving them of the difficulty of informing a large number of persons simultaneously." It has also enabled the forming of groups assembled on the spur of the moment on topics of the most diverse natures: One finds, for example, in addition to the inevitable cineasts and philatelists, a group of "early risers," and, of course, a group of "Teletel fanatics"; their members have all met each other by way of the electronic mailbox.

Associations are not the sole beneficiaries of this system. For the suppliers of information, it becomes a means of enhancing their contacts with their clients and other users, and of enabling to effect "mailings." As for the PTT, it uses the mailbox as a "suggestion box," inviting criticisms and suggestions.

A Continuing Creative Effort

For the 3V experiment to fulfill its role, it is essential that Teletel's "interactivity" be applied to the rationalization of its use. Three parties to it, three different viewpoints must be merged for the perfecting of the system: Suppliers of information, users and PTT. This has led the first two to form respective associations for the purpose of concerting viewpoints and effort within each group as a party and reaching agreement with the other two parties.

The aim of the AAT 3V, which presently has almost 500 members, is to ensure that the users take their due place in the three-way dialog. An arduous task, according to Mr Cayazzo, since "the users of Teletel--and this is inherent in the very nature of sampling--do not represent a homogeneous category: Some of them use their terminals regularly and abundantly; others, on the contrary, do not turn their equipment on except to show it to their friends..." The AAT 3V is endeavoring, therefore, not only to make known to the suppliers and to the PTT what needs to be done to improve their respective "service offerings," but also to make known to the users how they can take advantage of all the possibilities being offered them.

The project staff is also organizing visits to the users for exchanges of views and information and round table discussions. It also benefits from Teletel by way of the suggestion box mentioned above and through the magazine T 3V; this videographics magazine reports on the evolution of the experiment, and various suppliers of information try therein to interest users in the rubrics covered under a "topic of the month": Energy, the holidays, managing one's budget... The fact that each of these topics has generated more than 2,000 calls attests to the interest that exists in exploring in-depth the gamut of possibilities available in and through Teletel: A curiosity that, in going beyond mere interest in the tool itself, reflects a quest for improvement in the quality of day-to-day living.

After 9 months in operation, the Telel 3V experiment has shown that the system is now technically in running order, with a call-completion rate of 96 percent. It has furthermore enabled the users and the suppliers of information services to undertake jointly an exploration of the possibilities inherent in this new means of communication. While it has shown definite promise, and while the services it currently offers have proven that they can contribute amply to the simplification of daily life, to the limiting of useless wastes of time and energy, and to facilitating access to a broader range of information, it is still obviously a mere start. Clearly, the services currently available are far from being all ratable as perfectly tried and tested, and can certainly not lay claim to having exhausted all the possibilities of service to the general public that have been opened by interactive videotex.

9238
CSO: 5500/2296 END

JPRS 81763

15 September 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 238

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 81763

15 September 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 238

CONTENTS

WORLDWIDE AFFAIRS

Grenada To Receive Soviet Programming via Satellite (AFP, 7 Aug 82) 1

Dutch TV Network Carries Live Transmission From Soviet Sattelite (DE VOLKSKRANT, 26 Jun 82) 2

Briefs

Taiwan-UK Fast Facsimile Service 3
International Communications Conference Opens 3
'TASS', Philippines Agency Sign Accord 3
News Agency Cooperation With DPRK 4
Media Cooperation Agreement 4
Agreement Signed by Zimbabwe-USSR 4
Mexico Symposium on Mass Media 4
Radio Cooperation With Bulgaria 4
PRC-U.S. Firm Cable Agreement 4
FRG Seeks Halt to Radio Jamming 5
PRC Transmitters to Central African Republic 5

ASIA

INTER-ASIAN AFFAIRS

Talks With Singapore Communications Minister Held (ANTARA, 4 Aug 82) 6

Briefs
China-Japan TV Plant 7
Japanese Communications Delegation in Beijing 7

AFGHANISTAN

Briefs
Radio Station Geared to Emigres 8
Details for New Radio 8

AUSTRALIA

Communications Satellite Poses Concerns for West Australia
(THE WEST AUSTRALIAN, 20 Jul 82)............................ 9

Reassurance on Orbit
Network TV Issue

One of Two Challengers to Telecom Monopoly Withdraws
(Peter Freeman; THE SYDNEY MORNING HERALD, 20 Jul 82)...... 11

Government Opposes Funding Access to Landsat-D Satellite
(Nicholas Rothwell; THE AUSTRALIAN, 23 Jul 82)............. 12

Advanced Telephone Switching Systems on Increase
(THE AUSTRALIAN, 19 Jul 82)................................ 13

Book Notes Uses of Landsat Images of Australia
(Nicholas Rothwell; THE AUSTRALIAN, 27 Jul 82)............. 14

Use of Satellite To Spot Cyclones, Volcanic Ash Described
(Peter Terry; THE WEEKEND AUSTRALIAN, 31 Jul-1 Aug 82)..... 16

Cable TV Closer; Communities Get OK To Take Action
(THE AUSTRALIAN, 19 Jul 82)................................ 17

Supplementary Licenses for Rural Radio, TV Station Eyed
(Anne-Maria Nicholson; THE AUSTRALIAN, 27 Jul 82).......... 18

Multicultural TV Channel To Be Extended Nationwide
(Isabel Lukas; THE SYDNEY MORNING HERALD, 26 Jul 82)....... 19

Solar Power Cells Give Boost to Mobile Radios
(Nicholas Rothwell; THE AUSTRALIAN, 26 Jul 82)............. 20

Several 'Firsts' Recorded in Qantas Digital System
(THE AUSTRALIAN, 26 Jul 82)................................ 21

Local Company Develops Telex Network Control System
(THE AUSTRALIAN, 27 Jul 82)................................ 22

Briefs

Undersea Cable Repeaters 23
Ethnic Radio Funding 23
'Most Sophisticated' Communications System 23

BANGLADESH

Needs of Narayangan Telephone Exchange Told
(THE NEW NATION, 6 Aug 82)................................ 24

Briefs

Former Envoy Appointed Information Minister 26
Nagorpur Phone Exchange 26
Communications Projects Planned 26

INDIA

Minister Reports Delay in SLV-D2 Launching
(PATRIOT, 6 Aug 82).. 27

Importance of Radio, Television Discussed
(N. L. Chowla; THE TIMES OF INDIA, 6 Aug 82).............. 28

Plans To Use INSAT in Domestic Radio, TV Told
(PATRIOT, 9 Aug 82).. 30

Briefs

Radio Satellite Link' 31
TV Dissemination 31
Telecom Cooperation Wtih France 31
Midnapore Phone Exchange 32
Gauhati Relay Through Insat 32

JAPAN

NTT Develops Satellite Communications Technology
(KYODO, 9 Jul 82)... 33

'KYODO,' Malaysia's 'BERNAMA' Open News Circuit
(KYODO, 18 Aug 82).. 34

Japan To Experiment With New News Delivery System
(KYODO, 29 Jun 82).. 35

Briefs

Foreign Ministry Satellite Photography Plans 36

PAKISTAN

Earth Satellite Station and Gateway Exchange for Islamabad Planned
(DAWN, 11 Aug 82)... 37

PEOPLE'S REPUBLIC OF CHINA

Nanjing Station Tests Satellite TV Transmitting
(Jiangsu Provincial Service, 18 Aug 82)........ 38

Beijing-Hohhot Satellite Phone Link Tested
(XINHUA, 20 Jul 82)........ 39

Briefs
Satellite Link Tested 40
Shanghai Satellite TV Transmission 40

PHILIPPINES

Philippines Long Distance Telephone Employs Fiber Optics
(BULLETIN TODAY, 9 Aug 82)........ 41

Telecommunications Integration To Be Pushed
(BULLETIN TODAY, 5 Aug 82)........ 42

Briefs
Information Minister Blasts Western Media 43

SRI LANKA

Engineers' Exodus Threatens Overseas Telecommunications Service
(Tyronne Devotta; SUN, 3 Aug 82)........ 44

Briefs
FRG-Aided Transmitting Station 45

TAIWAN

Briefs
'CNA'Computerized Service 46

VIETNAM

SRV's Northern Provinces Hold Radio Conference
(Hanoi Domestic Service, 2 Jul 82)........ 47

EAST EUROPE

CZECHOSLOVAKIA

Broadcast Network Automation Viewed
(Jan Bubak; PPT REVUE, No 3, 1982)........ 49

Briefs
Information Exchange via Television 58

GERMAN DEMOCRATIC REPUBLIC

Briefs
Children Trained in Radio Communications 59

POLAND

Radio Solidarity Broadcasts in Warsaw Again
(AFP, 13 Jul 82).. 60

YUGOSLAVIA

SFRY Radio Director Holds Talks in Tunisia
(TAP, 27 Jul 82).. 61

Briefs
Satellite Station 62

LATIN AMERICA

COLOMBIA

Briefs
New Telecom President 63

COSTA RICA

Briefs
Public Security Asks News Media Cooperation 64
Formation of Communications Council Sought 64
Efforts To Counteract Media 'Campaign' 65

ECUADOR

Briefs
Peruvian Satellite Station Near Border 66

GUYANA

Broadcasting Service Official Explains Working of GBC
(SUNDAY CHRONICLE, 1 Aug 82)............................ 67

NICARAGUA

Briefs
Government Appoints Telecommunications Minister 70
TELCOR Obtains Loan From Bulgaria 70
Advances in National Broadcasting 70

PANAMA

Briefs
Proposed Media Board Will Hamper Press 71

TRINIDAD AND TOBAGO

TELCO Describes Development Objectives for 1980's (SUNDAY GUARDIAN, 1 Aug 82)................................ 72

VENEZUELA

Briefs
New Radio Stations 75

NEAR EAST AND NORTH AFRICA

INTER-ARAB AFFAIRS

Briefs
Forum Discusses Media Role in Lebanon 76

IRAN

Briefs
New Television Transmitters 77
TV Relay Station Replaced 77

IRAQ

Briefs
New Radio, TV Complex 78

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN

Briefs
New TV, Radio Transmitter 79

SUDAN

Briefs
Telecommunications Project 80

UNITED ARAB EMIRATES

Radio Stations To Be Set Up in Emirates
(KHALEEJ TIMES, 10 Jul 82)................................. 81

SUB-SAHARAN AFRICA

BOTSWANA

Briefs
New FM Transmitter 83

ETHIOPIA

Briefs
Time Division Automatix Telex 84

GHANA

Briefs
London Telephone Link Interrupted 85

LIBERIA

Briefs
New Radio Station 86

MOZAMBIQUE

Briefs
Provinces Rejoin Telex System 87

NIGERIA

Briefs
Radio Stations Called Illegal 88

SOUTH AFRICA

Briefs
Telsaf Takeover 89
Christian Radio 89

SWAZILAND

Government Urged To Halt Installation of Pirate Satellite Receivers
(James Dlamini; THE TIMES OF SWAZILAND, 19 Aug 82).......... 90

ZIMBABWE

Light-Wave Link To Boost ZBC Quality
(THE HERALD, 19 Aug 82).................................... 91

Briefs
Broadcasting Director 92
ZTV Color 92

USSR

Moscow Views CIA Role in External Broadcasting
(Radio Peace and Progress, 19 Aug 82)..................... 93

Briefs
Kirgiz Television Relay 94
TV Communications Station 94
Direct-Dial Links to West Cut 94
Uzbek Satellite Television 94
Satellite TV Receiving Station Opens 95
Satellite Communication With Ships 95
Archangel Color Programming 95
95

WEST EUROPE

INTERNATIONAL AFFAIRS

Briefs
FRG-French TV Satellites 96

FEDERAL REPUBLIC OF GERMANY

FRG Cuts Funds for Information Programs in U.S.
(FRANKFURTER ALLGEMEINE, 28 Jul 82)....................... 97

FINLAND

Briefs
USSR Reduces Telephone Links 98

FRANCE

Briefs
'AFP' Photograph Transmissions 99

GREECE

Briefs
Zakinthos Radio Begins Operations 100
Communications With Turkey 100

PORTUGAL

Briefs
New News Agency 101

UNITED KINGDOM

Briefs
Telephone Lines With USSR Reduced 102

GRENADA TO RECEIVE SOVIET PROGRAMMING VIA SATELLITE

PA091826 Paris AFP in Spanish 0240 GMT 7 Aug 82

[Text] St Georges, 6 Aug (AFP)--Grenada will install a satellite groundstation to receive Soviet radio and television programs.

This topic was discussed during Grenadian Prime Minister Maurice Bishop's recent visit to Moscow, Radio Free Grenada reported.

The Grenadian prime minister said that "this will make it possible to break imperialism's cultural yoke on Grenada" and to receive news "from progressive and socialist programs different from the garbage from the United States that we must now watch."

Meanwhile, the Grenadian radio station noted that the Soviet Union has donated steel equipment and farming material valued at 14 million and that it signed an agreement to purchase cacao, nutmeg and bananas from Grenada at fixed prices over a 5-year period.

These trade agreements with the USSR will permit Grenada to diversify its trade relations and to develop new markets, Bishop said.

During his trip to Moscow, Bishop also obtained a line of credit for $7.5 million, payable in 10 years at an interest rate of 3 percent and with a grace period of 3 years.

This credit will permit the construction of the satellite groundstation and will help to finance studies on the possible construction of a port on the island's eastern coast.

CSO: 5500/2341

DUTCH TV NETWORK CARRIES LIVE TRANSMISSION FROM SOVIET SATELLITE

PM301301 Amsterdam DE VOLKSKRANT in Dutch 26 Jun 82 p 7

[Unnamed "own correspondent" report: "Cable Television Broadcast Pictures from Russian Satellite"]

[Text] Amstelveen--Despite a warning from the Culture, Recreation and Social Welfare Ministry the Amstelveen Cable Television Network showed pictures from the Russian Gorizont communications satellite Friday evening [25 June]. The broadcast was terminated voluntarily at 1930 hours because the linkup between SOYUZ-T6 and SALYUT-7 was delayed.

Russian television, which had intended to show live pictures of the linkup, ended the broadcast because of the late hour. Moscow is two hours ahead of west Europe.

Thursday evening the Amstelveen Cable Television Network broadcast a live report of the SOYUZ launch, also deriving from the Gorizont satellite. The pictures were accompanied by a commentary by a Dutch space expert. After about an hour a Culture, Recreation and Social Welfare Ministry official telephoned to say that the broadcast must be stopped immediately, the Amstelveen Central Antenna System Foundation complied.

The official banned the broadcast because it involved a program produced by Amstelveen, because of the accompanying Dutch commentary. When a locality wants to produce a program of its own, permission must first be asked of the minister for culture, recreation and social welfare. The two broadcasts were intended as experiments. The Amstelveen Cable Network wanted to know whether viewers want a greater choice of programs.

CSO: 5500/2341

BRIEFS

TAIWAN-UK FAST FACSIMILE SERVICE--Taipei, 3 Aug (CNA)--The International Telecommunications Administration (ITA) opened direct fast facsimile service between the Republic of China and the United Kingdom starting Tuesday. Fast facsimile service between the two countries was originally transferred through Hong Kong. To improve quality and speed of the service, the ITA decided to open the direct service. The charge is 400 NT dollars (about 10.5 U.S. dollars) for a 276 mm long and 193 mm wide of any document, chart or kind of sheet language. [Text] [OW031357 Taipei CNA in English 1340 GMT 3 Aug 82]

INTERNATIONAL COMMUNICATIONS CONFERENCE OPENS--Sofia, 10 Aug (BTA)--A meeting between the representatives of the administrations of the communications of Bulgaria, Kuwait, Turkey, Iraq and Syria opens today. The possibilities for direct and transit telecommunications via the territories of the countries participating in the meeting will be discussed. The telecommunication main will follow the Europe-Sofia-Ankara-Damascus-Baghdad-Kuwait route and then further, via a cable crossing the Indian Ocean, to Pakistan, India, Sri Lanka, Bangladesh, Burma, Malaysia, Indonesia and up to Australia. The countries participating in the meeting will inform each other of the present possibilities of their communication systems, ensured by terrestrial radio relay and coaxial cable lines, with a view of establishing already in the initial stage new communication links to meet the present and future demands. Discussed will also be some questions pertaining to technoscientific cooperation in telephone and telex communications and to broadcasting and telecasting of the Eurovision and Intervision programmes. [Text] [AU101500 Sofia BTA in English 1430 GMT 10 Aug 82]

'TASS,' PHILIPPINES AGENCY SIGN ACCORD--An agreement on cooperation and exchange of information between TASS and the PHILIPPINES NEWS AGENCY (PNA) was signed in Moscow on 7 July. The document was signed by S.A. Losev, general director of TASS, and G.S. Cendana, Philippine minister of public information. (V. Malivanag), general director of the PNA, was present at the signing. The minister and the general director are in Moscow in connection with the visit to the USSR by the prominent Philippine state and public figure I.R. Marcos, governor of Greater Manila. [Text] [PM141255 Moscow IZVESTIYA in Russian 8 Jul 82 Morning Edition p 4]

NEWS AGENCY COOPERATION WITH DPRK--Georgetown, Guyana, 21 Jul (CANA)--The state-run GUYANA NEWS AGENCY [GNA] has signed a cooperation agreement with the CENTRAL NEWS AGENCY of the Democratic People's Republic of Korea. At the ceremony Korean ambassador to Guyaha, Pak I-hyon, said the exchange would further develop relations between Guyana and his country. Courtney Gibson, editor of the GNA, described the agreement as a further step towards building a new international information and communication order. [Text] [Bridgetown CANA in English 2223 GMT 21 Jul 82]

MEDIA COOPERATION AGREEMENT--A cooperation agreement on exchange of news and photographs and a work protocol were concluded and signed on 4 July in Kabul between BAKHTAR information agency of the DRA and ORBIS Press Agency of the CSSR. The agreement and protocol were signed by the heads of the BAKHTAR and ORBIS agencies and documents were exchanged. According to this agreement cooperation between the DRA and CSSR concerning the exchange of news and publications for the information of the peoples of the two countries regarding their life, work and development (?would be exchanged). [Text] [Kabul Domestic Service in Dari 1530 GMT 5 Jul 82]

AGREEMENT SIGNED BY ZIMBABWE-USSR--An agreement between the USSR State Committee for Television and Radio Broadcasting and the Zimbabwe Broadcasting Corporation was signed in Harare by Popov, deputy chairman of the USSR State Committee for Television and Radio Broadcasting, and (Tirivati Kangai), director general of the Zimbabwe Broadcasting Corporation. The document provides for the exchange of television films, programs and newsreel material on the political, economic and cultural life of the Soviet Union and Zimbabwe. [Text] [LD030106 Moscow Domestic Service in Russian 2230 GMT 2 Jul 82]

MEXICO SYMPOSIUM ON MASS MEDIA--An international symposium on "The Mass Media" has ended in Mexico. It was organized by the newspaper EL DIA (one of the leading and most influential newspapers in Mexico), TASS reports. The symposium examined a wide range of questions touching on the process of the development of the mass media, the search for ways of resolving the problems existing in this field and the elaboration of future directions for modern journalism. Representatives from the USSR, Cuba and Nicaragua stressed that the mass media must actively influence public opinion and expose the inciters of war and champions of the arms race who are trying to mislead world public opinion. [Text] [PM060859 Moscow IZVESTIYA in Russian 29 Jun 82 Morning Edition p 4]

RADIO COOPERATION WITH BULGARIA--An agreement for cooperation between the Sri Lanka Broadcasting Corporation [SLBC] and the Bulgarian radio was signed on 2 August at the SLBC. This agreement will help strengthen the bonds of friendship between the SLBC and the Bulgarian radio through the exchange of programs depicting the cultures of the two countries. [Colombo International Service in English 1045 GMT 3 Aug 82]

PRC-U.S. FIRM CABLE AGREEMENT--Beijing, 27 Aug (XINHUA)--An agreement on the transfer of technology for manufacturing telephone cables has been signed by Chinese corporations with the Essex Group Inc., a subsidiary of the United Technologies Corporation, U.S.A., according to the Ministry of Posts and Telecommunications. According to the agreement which took effect from 15 August, the production facility of the Chengdu cable plant will be revamped to manufacture polyolefine insulated and integral sheathed telephone cables, developed by the U.S. Essex Group and used throughout the world. The Essex Group will transfer overall production techniques, experiences and know-how for the cable products and take charge of the technological process design and the selection of production equipment, the agreement says. The group will also give technical training and send engineers to the plant to render technical services. The group will also act as sales agent for the products in international market. The new facility will open by 1984 and reach the designed capacity by 1988. [Text] [OW271632 Beijing XINHUA in English 1513 GMT 27 Aug 82]

FRG SEEKS HALT TO RADIO JAMMING--Bonn, 30 Aug (DPA)--The Federal Government is still making efforts "with the means at its disposal" to stop the jamming of Western radio broadcasts by the Eastern bloc countries. This fact emerged from the FRG Government's response--made public today--to Werner Marx, chairman of the defense committee. It was pointed out in the response that Federal Foreign Minister Hans-Dietrich Genscher has called on his Bulgarian counterpart to stop the jamming of Deutsche Welle broadcasts in Bulgarian. Marx said that according to the government statement, emphatic protests were made last spring to the Soviet Embassy in Bonn regarding the Soviet jamming of Deutsche Welle Russian and Polish language broadcasts. At the plenary session of the CSCE followup conference in Madrid, Genscher criticized Poland's jamming of radio broadcasts. Marx commented that in the past few weeks an increasingly massive campaign by Soviet-controlled media has been observed against American transmitters in particular. One could assume that the Polish military regime is trying to blame its increasing internal difficulties on the so-called influence of foreign "agitation stations." Everyone knows that the Americanstations and Deutsche Welle in particular aim at the highest degree of objectivity in their broadcasts in order to be able to truthfully inform people in Eastern Europe about events. [Text] [LD301904 Hamburg DPA in German 1258 GMT 30 Aug 82]

PRC TRANSMITTERS TO CENTRAL AFRICAN REPUBLIC--Beijing, 31 Aug (XINHUA)--China and the Central African Republic today signed a contract on the extension project of the Bimbo broadcasting station. According to the contract which was signed in Bangui, capital of Central Africa, China will provide two sets of China-made 50 kw transmitters and antennas for the station, and will undertake the construction of the machine room and other subsidiary buildings. [Text] [OW010105 Beijing XINHUA in English 1537 GMT 31 Aug 82]

CSO: 5500/2236

TALKS WITH SINGAPORE COMMUNICATIONS MINISTER HELD

BK040958 Jakarta ANTARA in English 0734 GMT 4 Aug 82

[Text] Jakarta, Aug 4 (ANTARA) -- Singapore Minister of Communications Ong Teng Cheong held talks here Tuesday with his Indonesian counterpart Rusmin Nuryadin. The discussions, held at the Minsitry of Communications here, had the nature of routine consultations and this time dealt with telecommunication and air transportation between the two countries, the spokesman of the Ministry of Communications, Abdullah, told newsmen after the meeting.

The Singapore minister arrived at Halim Perdanakusuma Airport at 0900 yesterday for a 2-day visit in the company of senior officials, including Secretary General of the Ministry of Communications Sim Kee Boon and Director of Telecommunication Sun Siauw Ma. He was accompanied at the talks by the Singapore ambassador here, J.F. Conceicao.

One of the topics discussed was the possibility of Australia's participation in the submarine cable communication system (SKKL) linking Southeast Asia with the Middle East and Europe. This project is an extension of the Medan-Singapore SKKL system built on the basis of a memorandum of understanding signed by the two communications ministers on May 23, 1981.

The two countries have agreed to build the two systems -- one linking Medan-Singapore-Middle East-Europe and the other serving Singapore-Indonesia-Australia. The two projects are now still in the feasibility study stage. The western project is being handled by the four countries Indonesia, Singapore, Saudi Arabia and France and the eastern project by Indonesia, Singapore and Australia.

In the field of air transportation the two sides discussed matters concerning the "Flight Information Region" in the South China Sea area in the light of the best interests of civil aviation in the surrounding countries, including Indonesia. They also discussed the two of the Indonesian Palapa A-1 satellite for border communication between the two countries for realization early next year [sentence as received]. In the first stage, the satellite to link Singapore with Pekanbaru (Riau), Pontianak (West Kalimantan) and Samarinda (East Kalimantan).

CSO: 5500/2236

BRIEFS

CHINA-JAPAN TV PLANT--The China National Electrical Devices Corporation and Japan's Hitachi have formally opened a plant in Xianyang, Shaanxi Province, which is designed to produce 960,000 colour picture tubes a year. The plant has already turned out more than 60,000 tubes, which have been inspected and approved by Chinese and Japanese engineers. The Chinese corporation now has four plants producing colour picture tubes, integrated circuits, chromium plates, and getters, a substance used to remove traces of gas from vacuum tubes. All have met world standards after only 3 years of trial production. As recently as 1980, China was unable to manufacture any of these products. [Beijing CHINA DAILY in English 23 Jul 82 p 2]

JAPANESE COMMUNICATIONS DELEGATION IN BEIJING--Beijing, 31 Aug (XINHUA)--State Councillor Gu Mu met this afternoon in the Great Hall of the People with a delegation from the Communications Committee of the Japanese House of Representatives led by Committee Chairman Kiyohi Mizuno. They discussed development of technology exchange in telecommunications. This evening, the delegation gave a return banquet attended by Wen Minsheng and Yang Taifang, minister and vice-minister of posts and telecommunications, and Koji Watanabe, minister of the Japanese Embassy in Beijing. [Text] [OW312031 Beijing XINHUA in English 1549 GMT 31 Aug 82]

CSO: 5500/2236

BRIEFS

RADIO STATION GEARED TO EMIGRES--Kabul, 26 Aug (TASS)--The first issue of the newspaper VOICE OF THE HOMELAND has come out. The paper is published by the National Fatherland Front and is geared to Afghans who have left their homeland under the influence of lying imperialist propaganda. The appeal by Babrak Karmal, the Afghan head of state, to his compatriots is published in the first issue of the paper. It contains a call to those who have been deceived and maltreated to return to their homeland and contribute to the development and prosperity of the new Afghanistan. Two hundred thousand issues of the paper have been printed. Broadcasts by the Voice of the Homeland radio station have also begun. They are being made in the Dari, Pashto and English languages. [Text] [LD270430 Moscow TASS International Service in Russian 0807 GMT 26 Aug 82]

DETAILS FOR NEW RADIO--Kabul, 28 Aug (BAKHTAR)--A 2-hour radio programme under the name of the "Voice of the Homeland" beamed to Afghans living abroad went on the air here by the radio-broadcasting station of the DRA on the evening of 27 August. The programme, broadcast on 19-25 and 49 metre bands everyday from 7 to 9 pm local time, presents facts about the revolution in Afghanistan and exposes the real faces of bandits and their criminal acts committed against the people and revolution in Afghanistan. The programme also devotes its time to the successes achieved by the April Revolution, especially its new evolutionary phase. [Text] [LD290600 Kabul BAKHTAR in English 0430 GMT 29 Aug 82]

CSO: 5500/2236

COMMUNICATIONS SATELLITE POSES CONCERNS FOR WEST AUSTRALIA

Reassurance on Orbit

Perth THE WEST AUSTRALIAN in English 20 Jul 82 p 33

[Text]

THE Federal Government has given fresh assurances that WA will not be disadvantaged by a decision to change the orbit of the proposed Australian communications satellite.

The Minister for Industrial Development and Commerce, Mr MacKinnon, said yesterday that the State Government's fears about the move had been largely put to rest.

The State satellite advisory committee was worried that a decision to move the orbital location from above Wyndham to a position off the east coast of Australia could seriously disadvantage WA.

At the new location, ground stations in WA would need to focus at an angle close to the horizon in order to "see" the satellite.

Travel

In addition, the signal would have to travel farther through the atmosphere. During heavy rainfall, there was a risk that the signal could deteriorate seriously.

However, the Commonwealth Department of Communications has replied to a series of technical questions put to it by a consultant to the satellite advisory committee, Dr Brian O'Brien.

Department studies showed that Australia as a whole, and WA in particular, would benefit from the changed orbit.

Because WA looks smaller when seen from the new orbit, there will be a greater concentration of signal power from the satellite beams.

In the new position, the national beam will be 17 per cent stronger in WA and the WA spot-beam 48 per cent stronger.

This will particularly benefit users of the proposed remote area television and radio service, enabling farmers and others to pick up the service using smaller and cheaper receiving antennas.

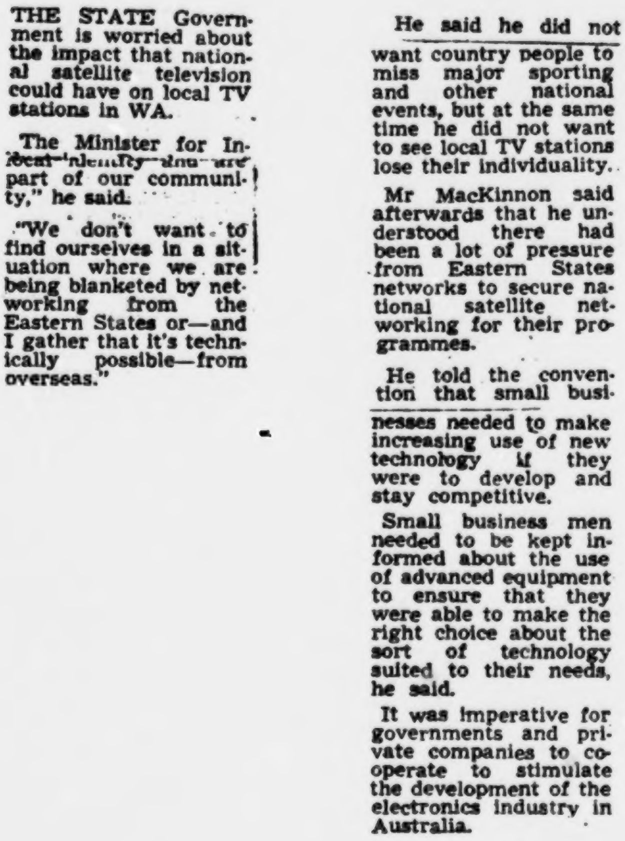
With the satellite in the originally-chosen position, remote users would have needed receivers with 1.8-metre diameter dishes costing from $1700 to $2500.

In the new position, smaller 1.5m diameter dishes costing from $1200 to $1900 will be suitable. The smaller receivers will also be easier to install and cheaper to maintain.

Network TV Issue

Perth THE WEST AUSTRALIAN in English 20 Jul 82 p 10

[Text]



THE STATE Government is worried about the impact that national satellite television could have on local TV stations in WA.

The Minister for In- [illegible] are part of our community," he said.

"We don't want to find ourselves in a situation where we are being blanketed by networking from the Eastern States or—and I gather that it's technically possible—from overseas."

He said he did not want country people to miss major sporting and other national events, but at the same time he did not want to see local TV stations lose their individuality.

Mr MacKinnon said afterwards that he understood there had been a lot of pressure from Eastern States networks to secure national satellite networking for their programmes.

He told the convention that small businesses needed to make increasing use of new technology if they were to develop and stay competitive.

Small business men needed to be kept informed about the use of advanced equipment to ensure that they were able to make the right choice about the sort of technology suited to their needs, he said.

It was imperative for governments and private companies to co-operate to stimulate the development of the electronics industry in Australia.

CSO: 5500/7562

ONE OF TWO CHALLENGERS TO TELECOM MONOPOLY WITHDRAWS

Sydney THE SYDNEY MORNING HERALD in English 20 Jul 82 p 21

[Article by Peter Freeman]

[Text]

The challenge to Telecom's communications monopoly suffered a setback yesterday when its main rival, Business Telecommunications Services Pty Ltd, lost two of its founding shareholders.

The two to withdraw from BTS were Amalgamated Wireless (Australasia) Ltd and the major building products group James Hardie Industries Ltd.

In a joint statement yesterday the companies said AWA had identified a conflict of interest between its role in BTS and as a supplier to its major customer, Telecom.

According to the general manager of BTS, Mr Peter Holmes aCourt, the decision of the two companies to withdraw had been mutually agreed on and would not affect the role or scope of the company's operations.

Asked about his company's withdrawal from BTS the managing director of James Hardie, Mr David Macfarlane, dismissed suggestions it reflected disagreements within the communications company.

"As with the other shareholders we joined simply to have a look at BTS's prospects," said Mr Macfarlane. "we have to the conclusion it doesn't fit James Hardie's long term plans. There is definitely nothing sinister about our decision to withdraw."

BTS was established in September, 1980, with a general brief to "research and define" the long-term communications needs of business. Since then it has taken the initiative in the campaign against Telecom's communications monopoly.

The founding shareholders were Mr Kerry Packer's Publishing and Broadcasting Ltd, IBM Australia Ltd, Australian Consolidated Industries Ltd, CRA Ltd, CSR Ltd, the Myer Emporium Ltd, the AMP Society Ampol Petroleum Ltd, Thomas Nationwide Transport Ltd, AWA and James Hardie. These companies were later joined by BHP.

The potential for divergences within BTS was shown late last year when the company was confronted with the Federal Government's decision to scrap Telecom's proposed national videotex (Prestel) service.

Although BTS had apparently wanted Telecom to be able to compete in this area it refrained from criticising the decision.

This stance seemed to reflect the fact that two of its members, Myer, and Publishing and Broadcasting, hoped to gain from the Prestel decision.

Similarly, while Myer is publicly enthusiastic about the development of cable television. PBL sees its own television interests threatened by cable technology. The pair put quite different submissions to the Australian Broadcasting Tribunal's inquiry into the issue.

And while AWA endorsed the BTS submission to the Davison Inquiry into Telecommunications it later took a different view in its own submission.

CSO: 5500/7562

GOVERNMENT OPPOSES FUNDING ACCESS TO LANDSAT-D SATELLITE

Canberra THE AUSTRALIAN in English 23 Jul 82 p 4

[Article by Nicholas Rothwell]

[Text]

AUSTRALIA will not have access to the high-quality satellite images of the continent taken by the new Landsat-D spacecraft.

The Federal Government has decided against spending $6 million on a special receiving station needed to pick up the images.

This means Australia will have no access to satellite pictures after the present generation of orbiting photographic spacecraft stops operating in 1986.

Landsat-D, launched last Saturday from the US, can provide farmers, miners, defence planners and scientists with pictures that are twice as detailed as any previous space images and contain seven times more information on the earth's surface.

From their orbits more than 700 km above the earth, Landsat-D and similar probes will be able to distinguish features only 30 metres across and will pick up data that can distinguish different crops or rock formations.

The Minister for Science and Technology, Mr Thomson, and senior officials from his department, told representatives of six of the nation's largest mining and development companies this week that industry should pay for the receiving station if it wanted to use the data.

But the mining industry, which has used satellite images for the past 10 years with great success in prospecting, is refusing to finance the station on the grounds that the Landsat images are a national resource that will be used by many customers.

The new station is essential for access to Landsat-D pictures as the more accurate data is transmitted on a waveband that cannot be picked up by the only Australian Landsat station, at Alice Springs.

Senior mining company executives tried to persuade Mr Thomson and the Minister for National Development and Energy, Senator Carrick, of the potential economic benefits offered to the community by the new system.

The major industry group of satellite image purchasers, Indusat, has warned that without the new receiving system Australia will be unable to receive any new Landsat data except basic weather pictures.

Indusat, whose members include CSR and Western Mining Corporation, claims Landsat-D could play a critical role in agriculture by making possible highly accurate estimates of crop acreage, flooding and salt levels.

The group's senior representative, Mr Dick Walker, said yesterday the mineral and oil exploration industries were confident Landsat-D would offer highes benefits.

"We have suggested to the Government that it should build the station and operate it on 'user pays' principle since this is the only system that is compatible with the spirit of free dissemination of data," Mr Walker said.

Mr Thomson would only commit the Government to spending $300,000 to upgrade the present receiving equipment to pick up data from Landsat-D's "multispectral scanner" device. But this would not be enough to receive the new type of detailed signals from the satellite.

The mining industry, which believes the market for satellite images will expand rapidly soon, suggested all users pay at market price, and opposed separate price tiers for private and public users.

"There is a real risk of export earnings by Australian resource companies being disadvantaged. Overseas-based companies will be able to gain experience in using data from the new satellites in their home country," Indusat warned.

CSO: 5500/7562

ADVANCED TELEPHONE SWITCHING SYSTEMS ON INCREASE

Canberra THE AUSTRALIAN in English 19 Jul 82 p 18

[Text] **DATAPOINT Corp Pty Ltd is making inroads into the emerging Australian market for advanced telephone switching systems.**

The company, which took over Sigma Data just over a year ago, is already showing the upper echelons of the Australian business community how to reap profits from its automatic call distributor (ACD) systems.

Datapoint has done four installations in Australia so far and has orders for four other large systems.

The four have an installed value of about $2 million but the systems start from $50,000 and range well past the $500,000 mark, depending on the type of system the client company needs.

Basically the ACD is a telephone queuing system which works in conjunction with a PABX, rather than replacing it.

Datapoint company guarantees that the first call in will be the first answered and each grouping of phones will get an even load.

ACD also provides comprehensive monitoring facilities.

All clients have been large service companies relying heavily on the telephone to do business — mainly on the answering end of the phone.

Avis has one in Sydney. TAA has systems in Brisbane and Perth, and John Fairfax has one.

The primary motivation for these users to select this type of equipment was to give a better service.

That the improved service came with elaborate and comprehensive monitoring equipment was undoubtedly a major consideration.

Avis found the monitoring equipment to be more revealing than it imagined. The company's executives were aghast to find out how many calls dropped out while waiting to be answered.

Gains

These dropouts would most likely try their luck calling Avis' competitors.

When the Avis system was up and running the amount of calls answered rose by 60 per cent and the number of bookings rose 20 per cent.

Admittedly this was suported by a massive advertising campaign, but the company says it could not have responded to the surge in calls if it did not have the ACD in place.

Gains of this magnitude could not be expected in all applications of ACD equipment but where they do occur, they pay off the system in a relatively short time.

The ACD is continually looking around to find a party to answer a call.

Specific procedures are programmed into the unit. If it cannot carry out its primary procedure it then goes on to the next step, and so on.

The ACD system can be programmed to patch the caller to another number, be it local, interstate or overseas — all with no charge to the caller.

It can be programmed to answer the call with a message, and introduce background music to make waiting more bearable for the caller.

The messages are digitised so there is no chance of a tape recording malfunction.

Datapoint expects to continue doing solid business in ACD's but managing director, Mr Robert Kaye, is more excited about the company's next step — the Information Switching Exchange (ISX) which is now waiting approval from Telecom.

The ISX will switch voice or any kind of digital information. While the ACD works in conjunction with the PABX, the ISX supersedes the PABX.

The beauty of the ISX is that any line can be used for a variety of applications.

Plugging in a phone, facsimile, or data processor do not require a separate connection.

CSO: 5500/7561

BOOK NOTES USES OF LANDSAT IMAGES OF AUSTRALIA

Canberra THE AUSTRALIAN in English 27 Jul 82 p 18

[Review by Nicholas Rothwell of book "Satellite Images of Australia" by K.G. McCracken and C.F. Astley-Boden]

[Text]

DISPLAYED like a field of glinting jewels, Australia's riches and subtleties are captured by the all-seeing eye of the satellite in this sumptuous record of images of this continent glimpsed from the fastness of space.

This portfolio of pictures collected by the American Landsat earth-imaging satellite has been assembled by two of the CSIRO experts involved in the research programs which have resulted in the development of one of the world's leading computer image enhancement ventures.

The authors have boldly given the treasure-trove formed by these images — a profusion of glimpses from the eye of the satellite, orbiting 920 km above the Earth's surface — their rightful title, describing them as "dreamtime art" painted by wind, sun, water and time on a natural canvas.

But many of these images are processed by computer after collection at the advanced Landsat receiving station at Alice Springs, and far from being natural records of the appearance of Australia, they are complex false-color composites that reveal the true character of the continent.

With such probes as the Landsat imaging cameras, vital data can be obtained for studies of earth resources, for mapping, for forestry and crop management, while the final images have a hallucinatory beauty that seems redolent of the brooding heart of the continent.

Mr Ken McCracken, Chief of the CSIRO Division of Mineral Physics, together with Ms Christine Astley-Boden, information officer for the CSIRO Institute of Energy and Earth Resources, have crafted together images that display the full range of Landsat's capabilities.

Here are depictions of Australia's capital cities — revealed as tiny footholds clinging to the coasts of the landmass — contrasting with the kaleidoscopic representations of the hinterland.

Transmissions

Each Landsat image is collected by a multispectral scanning telescope, detecting light in green, red and two infra-red bands, with a feature resolution of 80 metres — and in each picture are contained 7.5 million of these tiny picture elements.

The information to build up these "pixels" is transmitted to the Alice Springs receiving station by radio signal, and the different color bands are then combined into the exotic hues recorded in the final images.

Australia has always been a world leader in the use of aerial photography, but Landsat was of little benefit to this country for several years because of a trick of nature.

Since this continent is extremely "bright" to the eye of the satellite, normal Landsat images were always "dazzled" and special computerised image-enhancing was essential before the features of the landscape could stand out.

But CSIRO workers developed a process to "clean up" the images, and by 1979 the special Landsat receiving station was in place to receive continuous transmissions.

In the coming decade, the Alice Springs station will assume ever-growing importance, with the launch of the French Spot satellite and the US Landsat 4 series, which will upgrade even further the "scenes of grandeur, delicate beauty and complex patterns that pass beneath the satellites each day".

In these ochres, greys, the vivid reds thrown back to the sky by vegetation, the cyan blue of lakes and streams, the oranges of monsoon growth, can be read the tell-tale signs of the resources of the country — self-evident to the trained geologist, but a mysterious tracery of colors to the untrained eye.

From Broken Hill to Cooper Creek, from the wilds of Cape Bougainville to the uranium province, the different "eyes" of Landsat are presented here.

Mr McCracken gives examples of pure infra-red images — built up from nothing but the thermal signature of the earth, while experts from CSIRO land use, remote sensing and forest management teams contribute their experiences in satellite image use to the volume.

Don Gray, director of the Australian Landsat Station, details the operation of the complex data acquisition facility, which receives the multispectral data prior to its transportation to a digital processing centre in Canberra.

Accurate

The bulk processing system and a separate high-precision processing system used in image processing are both based on Interdata minicomputers, and a complete catalogue of Australia developed from the satellite pictures is now comprehensively indexed and rapidly made available to a wide range of users.

The man who developed the computer enhancement of the Landsat images, Dr Andy Green, whose research group is now perfecting image processing techniques, explains the data correction systems developed for use with the Australian pictures.

The raw Landsat data can be "improved" by three techniques.

Either high quality pictures are generated by using a computer to correct the data for more accurate final images, or images optimised to solve a particular problem of picture interpretation can be produced, or computer maps of special regions can be built up.

In this last case, the computer itself makes decisions on the data, instead of producing images that must themselves be interpreted by a human expert.

Among the simpler techniques used are methods to emphasise small color differences or to suppress confusing illumination changes caused by varying topography.

"In general, enhancement techniques must be used for obtaining information that is subtly expressed in the tonal, textural and contextual content of the image," Dr Green explains.

He points out that such problems as the mapping of complex geological structures or the delineation of water flow under flood conditions call for an expert interpreter to gain the most from the imagery, even after maxiumum computer enhancement.

As a result of the pioneering CSIRO work, many mining companies and State authorities have decided to install their own computerised imageenhancing systems, and the Landsat images are being increasingly doctored by computer to provide accurate data.

But the final sensation created by the spectacle of these images is their depiction for use of a more measured perspective of the place of human endeavors on the surface of this planet.

Here, the nation's capital cities stand forth as mere specks.

CSO: 5500/7563

USE OF SATELLITE TO SPOT CYCLONES, VOLCANIC ASH DESCRIBED

Canberra THE WEEKEND AUSTRALIAN in English 31 Jul-1 Aug 82 p 2

[Article by Peter Terry]

[Text]

SCIENTISTS want to expand Australia's communications program so that a satellite launched in 1985 could be used as an early warning system for cyclones and volcanic ash.

They say existing equipment makes it impossible to provide the latest data on cyclone threats or the position of volcanic ash, which poses a hazard to airlines.

Dr Bill Carroll, who leads a team of scientists using foreign satellites to pinpoint ash clouds, said in Perth yesterday the Federal Government should urgently review its satellite program.

He said American and Japanese satellites used to help identify the clouds could only scan the area once in three hours.

Additional equipment on Australia's proposed satellite could provide a constant monitor of volcanic ash and cyclones.

Dr Carroll's suggestion is unofficially backed by airlines operating from Australia, and should be discussed by the powerful Orient Airlines Association which will meet in Manila in two weeks.

Qantas is then expected to detail Dr Carroll's work.

Dr Carroll's team of scientists are from the West Australian Institute of Technology, which, with the CSIRO, has made a breakthrough in tracking volcanic ash in the atmosphere.

They launched a crash program to track the ash immediately after a British Airways Boeing 747 suffered engine damage when it entered an ash cloud over Indonesia.

The team have devised a system by which satellite pictures can be analysed by computer to bring out the minute temperature differences the ash causes.

These pictures are now being used by the airlines but are only a guide.

Because of the time delays in scanning, the pictures are outdated by the time they are processed.

Dr Carroll said the United States had developed a satellite system which could provide a constant scan of danger areas, and this equipment should be used in the new Australian satellite.

"We must find out if it is too late to change the satellite communications program," said Dr Carroll.

"Every attempt should be made to get that equipment on board.

"We cannot just keep relying on other people's satellites," he said.

CSO: 5500/7563

CABLE TV CLOSER; COMMUNITIES GET OK TO TAKE ACTION

Canberra THE AUSTRALIAN in English 19 Jul 82 p 3

[Text] THE Federal Government yesterday paved the way for the introduction of cable television by allowing some communities to use the system to improve reception.

The widespread adoption of cable television as a commercial operation is under study by the Australian Broadcasting Tribunal.

But yesterday's move will enable some remote communities or those in poor reception areas to establish the technical infrastructure.

The scheme, known as Self-help Television Reception, offers four systems for receiving and re-transmitting television programs in the outback or in neighborhoods where the signals are blocked.

The Government insists that the costs for land, aerials and cable network should be borne by the users, although in some limited cases the Government will reimburse them.

Yesterday, the Minister for Communications, Mr Brown, said licences would be issued for community groups to receive television and then retransmit the signals.

He said that under the scheme, communities would form a group to own and operate an aerial, transmitter and associated equipment.

"The community may decide to receive the local commercial telecast or the ABC, or both," Mr Brown said.

"If they wish to receive both, they will need to set up two systems under the scheme.

"The community group will also need the permission of the station from which the programs will originate."

Mr Brown said the costs of the self-help systems would vary, but the lowest "package" necessary was expected to cost less than $3000.

"Acquiring a site for the community television equipment and installing it will require additional expenditure," he said.

"Obviously, the more subscribers there are to a system, the less each individual will have to pay."

....

Mr Brown said three systems would use equipment known as translators to pick up signals and rebroadcast them.

These would be received by individual household aerials in the normal way.

"The fourth system will use a community aerial installation to receive signals and distribute them on a small-scale cable network to subscribers' homes," he said.

"For economic reasons these houses should be grouped close together.

CSO: 5500/7561

SUPPLEMENTARY LICENSES FOR RURAL RADIO, TV STATIONS EYED

Canberra THE AUSTRALIAN in English 27 Jul 82 p 3

[Article by Anne-Maria Nicholson]

[Text]

THE Federal Cabinet is to consider a recommendation that supplementary television and radio licences be granted to areas outside capital cities.

If accepted by Cabinet, legislation will be drawn up to allow more than 30 existing regional television stations to apply to broadcast on two separate channels.

In the case of radio, an amendment to the Broadcasting and Television Act was passed last year paving the way for commercial radio stations in country areas to apply for FM licences.

The Government has not yet given the go-ahead for the nation's 60 country radio licence-holders to apply to the Australian Independent Broadcasting Tribunal for the FM licences.

The Federal Minister for Communications, Mr Brown, said supplementary licences were like a half-licence, and would suit regional radio and television stations in areas where it was not economic to support two separate licences.

If supplementary licences are granted for television, viewers will benefit from a greater choice of programs, and broadcasters could have extra advertising revenue.

There has been intense lobbying by radio and television interests to push through the proposal. This is likely to increase following the announcement by Mr Brown at the weekend that multicultural television will be extended to another 10 centres in the next three years.

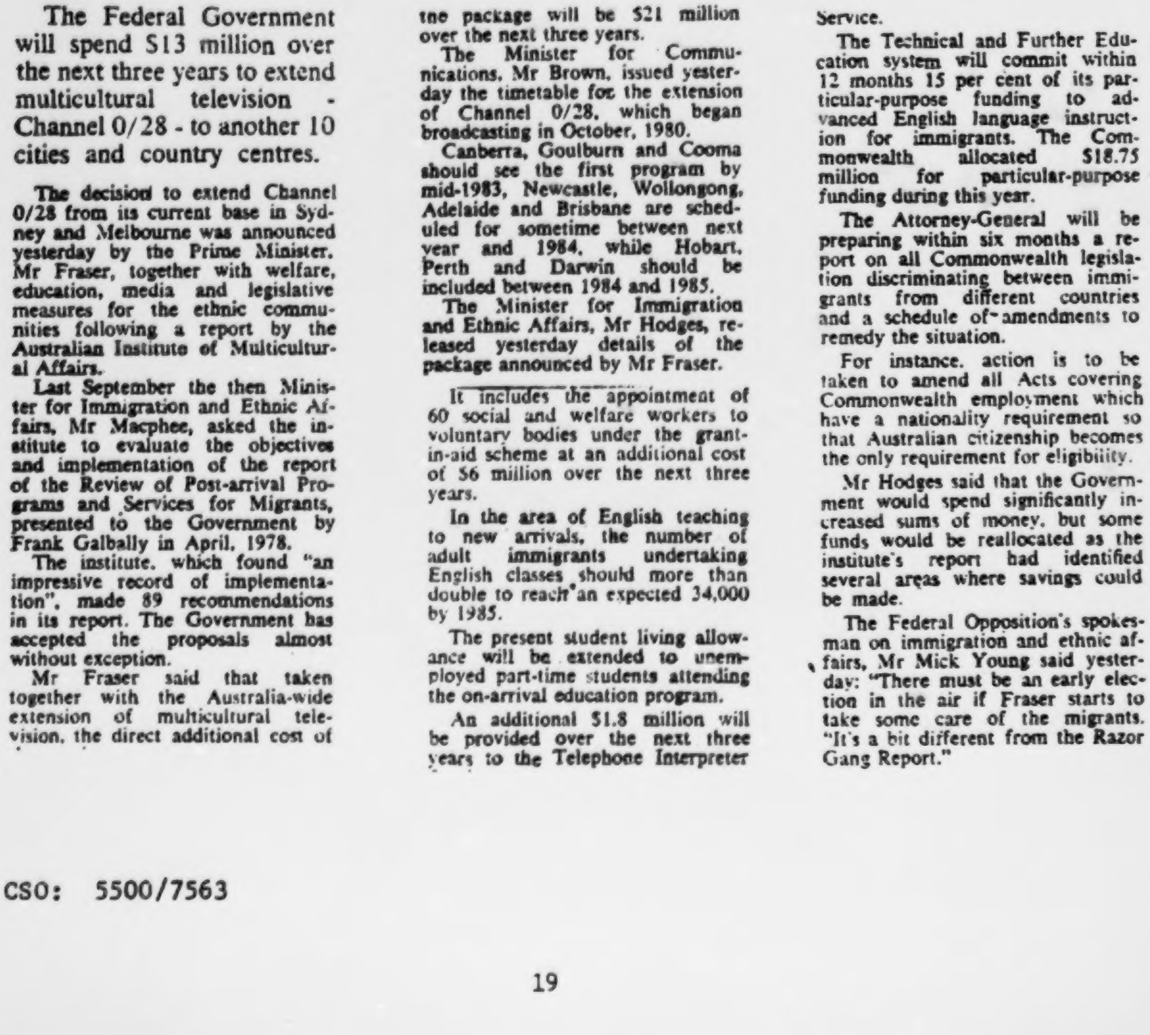
CSO: 5500/7563

MULTICULTURAL TV CHANNEL TO BE EXTENDED NATIONWIDE

Sydney THE SYDNEY MORNING HERALD in English 26 Jul 82 p 2

[Article by Isabel Lukas]

[Text]



The Federal Government will spend $13 million over the next three years to extend multicultural television - Channel 0/28 - to another 10 cities and country centres.

The decision to extend Channel 0/28 from its current base in Sydney and Melbourne was announced yesterday by the Prime Minister, Mr Fraser, together with welfare, education, media and legislative measures for the ethnic communities following a report by the Australian Institute of Multicultural Affairs.

Last September the then Minister for Immigration and Ethnic Affairs, Mr Macphee, asked the institute to evaluate the objectives and implementation of the report of the Review of Post-arrival Programs and Services for Migrants, presented to the Government by Frank Galbally in April, 1978.

The institute, which found "an impressive record of implementation", made 89 recommendations in its report. The Government has accepted the proposals almost without exception.

Mr Fraser said that taken together with the Australia-wide extension of multicultural television, the direct additional cost of the package will be $21 million over the next three years.

The Minister for Communications, Mr Brown, issued yesterday the timetable for the extension of Channel 0/28, which began broadcasting in October, 1980.

Canberra, Goulburn and Cooma should see the first program by mid-1983, Newcastle, Wollongong, Adelaide and Brisbane are scheduled for sometime between next year and 1984, while Hobart, Perth and Darwin should be included between 1984 and 1985.

The Minister for Immigration and Ethnic Affairs, Mr Hodges, released yesterday details of the package announced by Mr Fraser.

It includes the appointment of 60 social and welfare workers to voluntary bodies under the grant-in-aid scheme at an additional cost of $6 million over the next three years.

In the area of English teaching to new arrivals, the number of adult immigrants undertaking English classes should more than double to reach an expected 34,000 by 1985.

The present student living allowance will be extended to unemployed part-time students attending the on-arrival education program.

An additional $1.8 million will be provided over the next three years to the Telephone Interpreter Service.

The Technical and Further Education system will commit within 12 months 15 per cent of its particular-purpose funding to advanced English language instruction for immigrants. The Commonwealth allocated $18.75 million for particular-purpose funding during this year.

The Attorney-General will be preparing within six months a report on all Commonwealth legislation discriminating between immigrants from different countries and a schedule of amendments to remedy the situation.

For instance, action is to be taken to amend all Acts covering Commonwealth employment which have a nationality requirement so that Australian citizenship becomes the only requirement for eligibility.

Mr Hodges said that the Government would spend significantly increased sums of money, but some funds would be reallocated as the institute's report had identified several areas where savings could be made.

The Federal Opposition's spokesman on immigration and ethnic affairs, Mr Mick Young said yesterday: "There must be an early election in the air if Fraser starts to take some care of the migrants. "It's a bit different from the Razor Gang Report."

CSO: 5500/7563

SOLAR POWER CELLS GIVE BOOST TO MOBILE RADIOS

Canberra THE AUSTRALIAN in English 26 Jul 82 p 14

[Article by Nicholas Rothwell]

[Text] MOBILE radio transmission has been given an important boost as a serious avenue of telecommunications development in Australia.

According to a report by the Australian Electronics Industry Association this has been brought about by advances in computer technology and solar power cells.

The release of the new AEIA briefing, calling attention to major improvements in the range, quality and versatility of radio transmission services, follows a recent extension of the mobile radio frequency by the Federal Department of Communications.

The extension from 820 to 900 mHz has provided a wider amount of the radio spectrum for the use of mobile radio services across Australia.

A final detailed plan for the wider frequency range is now being developed by the department, in co-operation with representatives of the AEIA.

The Association's report gives details of two new developments in the field:

A special solar-powered system for the operation of mobile radio transmission equipment, just installed in the Northern Territory's Kakadu National Park, has opened up new avenues for use of the technology in remote areas.

The system was provided for the Australian National Parks and Wildlife Service, which sought a system using fixed, unattended relay stations for radio communication between the park's headquarters and rangers scattered through the 6100 sq km parkland region.

The system relies on solar powered cells since conventional power sources are not practical in the park's densely forested and uneven terrain.

The sites for the relay stations were selected after helicopter surveys and developed only after extensive consultations with local Aborigines to ensure that no sacred sites in the park would be despoiled.

World-wide patents are now being sought for the system, developed specially for the Kakadu park.

Capacity

Because of the terrain of Kakadu, patrol vehicles have had to carry back-up receivers, but the new microprocessor-controlled system needs no back-up — its design means that a circuit is available even if the main circuit fails.

In a more conventional application of the technology, the Australian Federal Police and NSW Police are being supplied with advanced radios equipped with microprocessor-synthesised frequencies.

These are tailored to police needs for simultaneous multiple-channel use in limited areas.

Standard police radios, with crystal frequency transceivers, are limited in channel capacity since each channel requires a separate crystal.

In the latest devices, electronic equipment produces 24 pre-programmed channels from a single reference crystal, and the machines can scan nine receiver channels at once.

Such mobile radio systems are being developed in tandem with advanced computerised control centres for the communications network.

A new "voting system", already installed for the Victorian Police's Melbourne advanced mobile radio network, ensures that the best signal connections are made between central operators and radio links.

The "vote" to find the best link is carried out by computer-sampling of the different two-way signals established, through 13 link stations in the headquarters transmission room of the Victorian system.

The AEIA report points out that this "voting" system, and a related "trunking" system — in which microprocessors use special software to switch automatically to the least-used frequencies in a given segment of the radio spectrum — are both innovations.

The new mobile radio telecommunications systems also have reduced one of the main disadvantages of conventional mobile radio transmission — the fact that busy traffic on a given channel makes it difficult for an operator to give a message.

New radio control systems can automatically scan the channels of a system and select the least crowded channel, reducing delays in urgent transmissions.

CSO: 5500/7562

SEVERAL 'FIRSTS' RECORDED IN QANTAS DIGITAL SYSTEM

Canberra THE AUSTRALIAN in English 26 Jul 82 p 14

[Text]

QANTAS has established a digital microwave link between its new office tower and its jet base at Mascot.

It has created several firsts in the process.

It is the first fully digital microwave link to be made in Australia.

It is the first private and fully exclusive system.

Unlike the normal leasing deals, Qantas is also the first company to own its equipment.

The link will handle all the airline's voice, data and facsimile circuits between the two centres, rendering cable communciations obsolete on that route.

It will start handling calls across the 7.5km distance in three weeks when Telecom hands it over.

Elaborate

The link will not run immediately at full power, but will be phased in gradually until all data and voice communications between the two points are introduced to the transmission.

The microwave system can handle information at up to 34 million bits a second. Qantas says this gives up to 46,900 conversations or 2400 data circuits. (A voice channel needs about 64,000 bits, and a data channel needs 96,000 bits.)

It will operate at 13 gigahertz, and its capacity can be expanded if necessary.

An elaborate back-up system has been installed which duplicates everything except the dishes themselves. The alternate system switches over when there is any malfunction.

To be absolutely safe, Qantas has made provision to use cables if the microwave link fails.

Equipment for the system has been supplied by 11 manufacturers, six of them Australian.

The whole system was installed and will be maintained by Telecom, but the equipment is owned by Qantas.

A mini computer at Telecom's control centre constantly monitors all the major system components of the microwave link.

A Qantas spokesman says Telecom helped the airline greatly in designing the interface for the major components.

One of the 1.8m-diameter microwave dishes is mounted almost 200m above ground level on top of Qantas' new $150 million office block on the Rocks side of Sydney's CBD. The other dish is suspended from the wall of a building at the jet base.

Qantas will not hold onto its string of firsts for very long. Telecom now has five large orders on the books from government departments and large companies.

Other companies are using non-digital (analogue) microwave links for inter-company communications.

A popular use for it is closed-circuit television between two of a company's properties.

There are also several installations using infra-red links to service various video conferencing facilities.

CSO: 5500/7562

LOCAL COMPANY DEVELOPS TELEX NETWORK CONTROL SYSTEM

Canberra THE AUSTRALIAN in English 27 Jul 82 p 26

[Text]

AUSDATA Pty Ltd, agent for the Four Phase Series IV and 5000 computers, has announced its TNCS telex network control system.

Developed in Australia by Ausdata, the TNCS software allows telex messages to be keyed as word processing documents and then queued for transmission via one of up to four leased or public telex lines.

Incoming messages are stored in a word processing text area for subsequent printing or re-routeing via Four Phase's electronic document distribution software.

Announcement

TNCS runs under Four Phase's MFE IV operating system.

Ausdata said TNCS allowed frequently-used telex numbers and their answerback codes to be called up by keying a three-digit number.

Message queues for each line could be displayed and entries could be deleted from a queue.

"All significant events are automatically recorded in a system log file, and information about incoming and outgoing messages is noted in separate statistics files."

An Ausdata spokesman stressed that the recent announcement of Macroset's distributorship of the Four Phase 312 did not change Ausdata's relationship with Four Phase.

"The System 312, an IBM 4300 plug-compatible machine, is an independent product for which Macroset is ideally situated," he said.

"We welcome Macroset's involvement with Four Phase and look forward to working closely with the company on future joint marketing opportunities."

He said Ausdata's TNCS had completed field testing at Ciba-Geigy, which had a network of four Four Phase systems for word processing.

A 480K System IV 90 at CibaGeigy's head office in Lane Cove handles all traffic on one public and two leased telex lines.

Smaller System IV 70s in three outlying offices route telex messages to and from the central system via dial-up Datel lines using Four Phase document distribution software.

CSO: 5500/7563

BRIEFS

UNDERSEA CABLE REPEATERS--STC Australia has shipped its first batch of nine electronic repeaters for the ANZCAN undersea cable. The cables were made at STC's Liverpool plant in a specially constructed $10 million clean area factory opened by the Minister for Communications, Mr Brown, on May 28. STC Australia will make at least 450 of the 1000 repeaters required for the cable, to be delivered by the end of next year. Repeaters will be placed at 12km intervals along the 14,000 length of the cable. High technology has gone into the manufacture and assembly of the repeaters, which must operate at the bottom of the ocean for 25 or more years without maintenance. There are 14 nations involved in the project, but Australia will be paying for approximately half of it. Australian participation and offsets amount to $78 million. The 1380 circuit cable goes from Bondi Beach, Sydney, to Norfolk Island, Fiji, Hawaii and then Vancouver, Canada. A spur runs from Norfolk Island to Auckland.

ETHNIC RADIO FUNDING--Ethnic radio programmes on public broadcasting stations will get a 60 percent increase in Government subsidies this financial year. The Minister for Communications, Mr Brown, said yesterday that $650,000 would be provided in 1982-83 through Special Broadcasting Service subsidiaries. Mr Brown said the decision came after a study of the Galbally report on post-arrival programmes and services for migrants by the Australian Institute of Multicultural Affairs. The institute found that public broadcasting had provided radio services to a large part of Australia's migrant and ethnic communities. It found that $650,000 was necessary to ensure the viability and quality of the service. Mr Brown said that public broadcasting stations were important in providing ethnic radio programmes in centres not directly served by the Special Broadcasting stations 2EA and 3EA. He said that in the next three years the Government would also provide $90,000 to public broadcasting stations to train recruits in producing and presenting ethnic radio programmes. A discussion paper on the long-term development of ethnic radio would be issued shortly for public comment and a report prepared for Government consideration, Mr Brown said. [Text] [Melbourne THE AGE in English 26 Jul 82 p 6]

'MOST SOPHISTICATED' COMMUNICATIONS SYSTEM--The Australian Army's new communications system will be the most sophisticated in the world, according to its manufacturers, Plessey. The company said in London that the $7 million contract would lead to contracts worth a potential value of between $150 million and $200 million. Plessey's Chairman Sir (John Clark) said that strategically, it was the most important army tactical radio contract ever awarded to the company. He said the system was expected to set a new standard for defense communications around the world. [Text] [BK011200 Melbourne Overseas Service in English 0830 GMT 1 Aug 82]

CSO: 5500/2236

NEEDS OF NARAYANGAN TELEPHONE EXCHANGE TOLD

Dacca THE NEW NATION in English 6 Aug 82 p 2

[Text] Narayanganj--The Sub-divisional Telephone Exchange of Narayanganj needs immediate expansion and repair. It is learnt that scarcity of telephone cables, spare-parts and shortage to trained staff mostly crippled the exchange and its regular service to the subscribers has degraded very much.

It is further alleged that on average 50 percent lines of the 4000 lines exchange of this commercially important town have become inoperative. Expansion of 1000 lines installation work was supposed to start last year but there has been no sign of such progress. The subscribers have been facing innumerable problems with their telephone sets and also in getting lines.

It is very difficult for one to get line to Dacca from Narayanganj as there are 100 to 125 lines only working out of 287 lines.

There are only 70 lines functioning out of 178 lines started with 2 and in case of 3 only 15 lines out of 42 and in case of dialling by 4 only 10 lines out of 30 are working roughly. Sometimes most of the working lines become ineffective for technical reasons.

Similar is the condition with the incoming lines. A person is lucky enough if he avails Narayanganj from Dacca after tough try for several minutes. About 50 percent of the incoming lines remain idle and the situation will worsen further if effective measures are not taken immediately.

Number 14 is well known for time enquiry but sometimes it connects other places instead of giving time and only 2 lines are working out of 4 lines for time queries. Phonogram and trunk lines are also rendering poor service as only 2 phonogram lines are working out of 4 lines.

The authority planned to install 25 coin box telephone sets at different business centres of Narayanganj which was a long demand of the people, but only 9 coin box telephones have been installed due to scarcity of junction cable pair from Dacca.

The authority planned to install 25 coin box telephone sets at different business centres of Narayanganj which was a long demand of the people, but only 9 coin box telephones have been installed due to scarcity of junction cable pair from Dacca.

It was gathered that the T&T authority would establish telephone exchange in Nabiganj, Siddirganj and Fatullah and if this plan was implemented immediately the people of the suburb areas would get the telephone facitlity and the long demand of the local people would be fulfilled.

It was also gathered that about 1500 applications are pending and awaiting telephone connections since long. According to many, since Narayanganj is a commercially important place and the Dundee of mile trade have large industrial belt, the capacity of the Telephone Exchange should be increased to 10,000 lines, in order to cater to the bare requirements.

CSO: 5500/7214

BRIEFS

FORMER ENVOY APPOINTED INFORMATION MINISTER--The chief martial law administrator today appointed former Bangladesh Ambassador to Burma Syed Najmuddin Hashim as a member of the Council of Ministers. He has been given the portfolio of the Ministry of Information. [Text] [BK021718 Dacca Domestic Service in English 1530 GMT 2 Jul 82]

NAGORPUR PHONE EXCHANGE--Tangail, Aug 10--A 30-line megneto system telephone exchange was opened at Nagarpur thana headquarters on Thursday, reports BSS. This is the seventh thana level telephone exchange in the district. According to official source another telephone exchange will be opened very soon by the telephone department at Bashail thana. Only three thanas will then be left without telephone exchange in the district. [Text] [Dacca THE BANGLADESH TIMES in English 11 Aug 82 p 2]

COMMUNICATIONS PROJECTS PLANNED--The Government has earmarked Taka 24.22 crore for implementation of 19 projects in the mass communication sector during the current fiscal year, reports BSS. Of the 19 projects, five are expected to be completed by 1982. These are development of Rampura TV Centre, establishment of a television relay station at Satkira, compilation of history of Liberation War, expansion of film studio laboratory and establishment of a television substation. The Annual Development Programme for 1982-83 envisages construction of a 100 KW medium transmission centre at Bogra for expansion of the radio network in the country's northern region. The implementation of the programmes relating to the television is expected to expand the television network throughout the country by 90 percent. [Text] [Dacca THE BANGLADESH TIMES in English 13 Aug 82 p 1]

CSO: 5500/7216

MINISTER REPORTS DELAY IN SLV-D2 LAUNCHING

New Delhi PATRIOT in English 6 Aug 82 p 5

[Text]

MINISTER of State for Science and Technology C P N Singh told the Rajya Sabha on Thursday that the Satellite Launch Vehicle-Developmental Two (SLV-D-2), which is part of the SLV-3 programme, will not be launched in September as scheduled but later.

In a written answer, Mr Singh informed that the launching was being deferred on account of the failure of the first test of Kevlar motors which took place on 31 July.

The results of the unsuccessful test were being analysed. On the basis of the analyses necessary changes would be effected and other tests carried out, he explained.

Elaborating further, he said testing of the three Kevlar motors for qualification of the fourth stage had been contemplated as part of the preparation for the launching of the SLV-D-2. The present failure was that of the first of such tests.

The Minister said SLV-D-2 incorporated an important improvement over its predecessors in that the fourth stage motor casing would utilise Kevlar as the casing material. Kevlar has the advantage of providing a lighter and more efficient fourth stage motor leading to increased payload capacity for SLV-3.

The launching of the SLV-D-2 is part of the SLV-3 programme to improve further the reliability in flight of some sub-systems and increase the orbital accuracy. It may be necessary to undertake at the most, two more launches of the SLV-3 configuration, which had already been flown thrice and placed two Rohini satellites into orbit. The first of these launches is designated as SLV-D-2.

In reply to another question Mr Singh said that India had demonstrated its capability for launching satellites from its own territory through the launch of the Rohini satellites by SLV-3.

The Government had recently approved two launch vehicle projects one with a capability to launch satellites of 150 kg class in the near earth orbit and another, more powerful launch vehicle capable of launching satellites of 1,000 kg class in near earth polar orbits.

CSO: 5500/7211

IMPORTANCE OF RADIO, TELEVISION DISCUSSED

Bombay THE TIMES OF INDIA in English 6 Aug 82 p 8

[Article by N.L. Chowla]

[Text] AT a recent conference of state information secretaries and ministers in New Delhi, if there was one single demand voiced by all states and Union territories, it was for the extension of television. Representative after representative justified it on account of specific and felt needs of the State that he presented. The States which have television centres wanted relay centres to cover the regions where the signal does not reach and those which have only transmission centres asked for full-fledged programme production studios in the state capitals in order that the programmes put out are of direct interest to the people.

There are several states which are not on the TV map. They are willing to make a beginning with the direct reception system (DRS) — the equipment that enables TV signal to be received directly from the satellite itself. The border states and Tamil Nadu strongly felt that colour TV with effective range was important to check what some considered as a "cultural invasion" through TV programmes from the neighbouring countries.

It was obvious that the commissioning of INSAT-I had created vast possibilities in TV expansion. The forthcoming Asian Games, has given to the demand for DRS a sense of urgency. States and Union territories in the north-east region, in particular, asked for DRS facilities to enable the people in the remote areas share the excitement of the game.

TV as a medium has acquired a great deal of glamour but the glamour for TV may or may not be related to it. I think the demand for TV on the regional level as well as the reasoning are perfectly legitimate. In the '50s and '60s the demand used to be for setting up radio stations and relay transmitters to communicate with the people to educate them and to create in them a sense of national awareness. Then also, in several cases, the radio transmissions from other countries was a strong argument for enhancing the power of the transmitter. The expansion of radio network in the country with 86 stations and 90 per cent of the population coverage as claimed, has not been an insignificant achievement. One may therefore expect a breakthrough in TV in the '80s.

Intimate Medium

Glamour apart, the TV medium with its visual potential can be more exciting and revealing than radio. If the potential is professionally exploited TV can also be more effective in discovering and sharing knowledge and in building a national identity than any other medium. When some one from Mizoram says that it is through TV that the people in that State can be exposed to people and places in the rest of the country, I am in full agreement with him. Besides, being visual, the medium is intimate and can create a sense of belonging as no other medium can.

As against the coldness of the printed word and lack of identification in radio broadcasts,TV pictures succeed in establishing identity. One of our outstanding commentators whose views in print have evoked a great deal of interest and controversy over several years once confided that he had remained unidentified by the people till he started appearing on TV. Whether through image-building, identification capability or transmission of live pictures, the TV medium has an edge over the other media for purposes of communication.

It needs to be said, however that even after the commissioning of INSAT and the utilisation of microwave linkages, it is difficult to image how TV transmission can penetrate the hinterland or remote areas all over the country and in the languages and dialects of the people. The satellite transmission will not respond to such needs. The DRS will also function under several constraints. The cost of the receiver and its maintenance may put on the exchequer a disproportionately high burden.

The problems of TV reception are far greater than those of radio reception. It has not so far been possible to reduce the cost of the ordinary TV receiver. In fact whether through the DRS or the ordinary TV receiver the only possibility of reaching the people is the development of community TV viewing. This aspect of TV reception would appear to need very special attention.

Social Purpose

In the use of TV in the social context, experience elsewhere has not been particularly heartening. The developmental role of TV has in several countries received only lip-service. What has prevailed is the entertainment ethos, imported programmes and imported ideas. The TV programme producers who are invariably trained in the western systems have imposed on the viewers concepts and formats of western programmes. This is what the foreign TV transmissions viewed in some parts of the country are now projecting. How would the Indian television meet this challenge? Would it excel in the styles of foreign transmissions in order to wean away the viewers? If that becomes a primary consideration the social purpose is lost.

The cost of setting up a TV station is high. It is over Rs. six crores. The range remains limited and the ownership of TV receivers is confined to only those who can afford to bear the high cost of the receiver. The policy to instal community receivers, to maintain and sustain them in urban or rural areas has not yet produced any spectacular results.

For a country of India's size with languages, dialects and cultural diversities radio broadcasting is very much a relevant medium. It is irreplaceable not only because it is an instrument of transmission with lower production costs than for any other mass medium with comparable penetration but also because the production of programmes can be decentralised and made relevant to smaller communities. Radio listening facilities still need to be expanded and strengthened. The reach of radio broadcasting is not enough. Remote areas in several parts of the country which have had no listening facilities can be reached only through radio.

There is a genuine fear that in the face of technological advances and possibilities of extending television transmission, radio broadcasting may be demoted, reduced to a lower position. The image-making capability of television should not be allowed to upset values or targets in communication. The case for TV can be over-emphasised. The demand for a TV station, a TV transmitter or a DRS should be justified, not as a status symbol, but as a part of our plan to reach the people through the most appropriate medium of communication.

CSO: 5500/7210

PLANS TO USE INSAT IN DOMESTIC RADIO, TV TOLD

New Delhi PATRIOT in English 9 Aug 82 p 8

[Text]

ABOUT 800 direct reception (DF) sets will be introduced in the rural areas of Andhra Pradesh, Orissa and Maharashtra to receive TV programmes direct from INSAT-1, report UNI, PTI, quoting an official release.

Television services to these three states through INSAT-1 will start on 15 August and networking of different Doordarshan centres for relaying the national programme will also commence from that date.

INSAT TV services to Bihar, Gujarat and Uttar Pradesh will be extended in a phased manner by 1984-85.

Three districts in each state will get a 45-minute educational service in the first phase starting on 15 August are Kurnool, Hyderabad and Mehboob Nagar in Andhra Pradesh Bolangir, Sambalpur and Dhenkanal in Orissa: and Nagpur, Bhandara and Chandrapur in Maharashtra.

INSAT-1 will provide both direct reception and rebroadcast service through conventional transmitters. The major advantage in the rebroadcast service is that ordinary (VHF) sets can be deployed within the service range of the transmitter.

INSAT is also being utilised to link all Doordarshan centres in the country. For this purpose. 'uplink' facilities are being provided at Delhi through the Transportable Remote Area Communication Terminal (Tract) made available by the Indian Space Research Organisation (ISRO).

Reception terminals are being set up at the various transmitting centres for simultaneous relay of common programmes.

Of the 800 DR sets being supplied by the Electronic Corporation of India Ltd. (ECIL) 50 sets have already been sent to Andhra Pradesh and are expected to be installed before 15 August. Another 150 sets will be supplied to Orissa by the end of this month. the installation of all the 800 sets is expected to be completed by the end of October.

According to the schedule worked out by Doordarshan, an educational TV service will be provided from 9.00-9.45 a.m in Andhra Pradesh and 9.45-10.30 a.m in Orissa.

The evening service with a board social education content will be telecast from Sambalpur from 7.00 to 7.30 p.m. for Orissa and from Hyderabad from 7.30 to 8.00 p.m for Andhra Pradesh. Nagpur will put out a Marathi programme from 7.00 to 8.00 p.m. on its VHF (terrestrial) transmitter. All the three centres will relay the national programme via INSAT from 8.00 p.m. to 9.30 p.m.

CSO: 550/7213

BRIEFS

RADIO SATELLITE LINK--All stations of All India Radio (AIR) are to be linked through the Indian National Satellite--INSAT-1--for relaying programs simultaneously. Linking of 10 AIR stations with Delhi is expected to be completed by the end of August. The stations are: Srinagar, Jaipur, Bhopal, Gauhati, Imphal, Kohima, Cuttack, Trivandrum, Ahmedabad and Hyderabad. Some of them have already started simultaneous broadcast through INSAT; 16 more stations will have the satellite link by March 1983. All the 85 AIR stations will be linked through the satellite by the end of 1983. Transmission facility at the Delhi station has already been provided through a mobile earth station. [Delhi Domestic Service in English 0240 GMT 1 Aug 82]

TV DISSEMINATION--With establishment of 15 more TV transmitters envisaged in the sixth plan, over 33 percent of the population would be covered by TV programs. Giving this information in the Rajya Sabha, Minister for Information and Broadcasting Vasant Sathe said that at present, TV programs are being telecast by 19 centers covering 17.90 percent of the population. [Text] [Delhi Domestic Service in English 0830 GMT 2 Aug 82]

TELECOM COOPERATION WITH FRANCE--India and France signed on 2 August a memorandum of understanding for close cooperation in the field of telecommunications. It covers seven agreements signed by the two countries earlier in the field of communications. The memorandum envisages support of the French Government in the execution of these agreements and for future continuous flow of technology in communications. It was signed by the Indian communications minister and the French minister for postal services and telecommunications. Projects to be executed under the agreements total 1.49 billion rupees with a foreign exchange component of 740 million. [Delhi Domestic Service in English 1530 GMT 2 Aug 82]

MIDNAPORE PHONE EXCHANGE--An automatic telephone exchange with 200 lines will be set up at Durgachak, Midnapore, in October, according to a Press release issued by the Central Government in Calcutta on Saturday. The exchange will have inter-dialling facilities with Haldia industries and Haldia township exchanges. The release added that some of the existing exchanges in West Bengal would be expanded during the next two months. The capacity of the Raniganj automatic exchange will be enhanced from 1,000 lines to 1,300 lines. This will be followed by an expansion of the Siliguri exchange. The Port Blair exchange would also have an additional 200 lines by October. [Text] [Calcutta THE STATESMAN in English 8 Aug 82 p 9]

GAUHATI RELAY THROUGH INSAT--The Gauhati Station of all India Radio [AIR] has started relaying news bulletins originating from Delhi through Insat-ia on an experimental basis. The full-scale relay of programmes is expected to start in the next few days. Gauhati will be the first air station in eastern India to use the satellite. Hyderabad, Ahmedabad and Srinagar have already started utilising the facility. [Text] [BK231245 Delhi ISI Diplomatic Information Service in English 0849 GMT 22 Jul 82]

CSO: 5500/2341

NTT DEVELOPS SATELLITE COMMUNICATIONS TECHNOLOGY

OW090502 Tokyo KYODO in English 0436 GMT 9 Jul 82

[Text] Tokyo, July 9, KYODO -- Nippon Telegraph and Telephone Public Corp. [NTT] has developed the technology to use a communications satellite for four-beam communications networks over the Japanese archipelago, officials said Friday.

The four-beam satellite communications system has been developed in preparation for launching a one-ton satellite in the future. The achievement reflects the high level of Japan's technology in multibeam satellite communications systems, they said.

The latest system emitting several beams from a single satellite has more advantages than the current single-beam system; radio stations on the ground will be able to receive more electric waves, the volume of electric transmission will be increased, the ground radio stations will be made smaller, and the system can make use of the static satellite orbit effectively.

In accordance with its information network system (INS), the public corporation is planning to launch a one-ton satellite called INS Satellite No. 1 having 25,000 telephone circuits in 1988 and another one of 3- to 4-ton class, INS Satellite No. 2 with 100,000 telephone circuits, some time between 1992 and 1995.

A number of organizations in other countries also have plans to launch similar satellites. Western Union of the United States is reportedly going to launch a seven-beam communications satellite next year, and the National Aeronautics and Space Administration (NASA) is planning to have its own satellite. The International Telecommunication Satellite Consortium (INTELSAT), and the telecommunications ministries of Italy and West Germany are also promoting similar schemes.

The Japanese public corporation has shifted its attention to the development of various equipment to be used for a gigantic multibeam satellite communications system -- 30-beam satellite communications system -- over Japan, officials said.

CSO: 5500/2236

'KYODO,' MALAYSIA'S 'BERNAMA' OPEN NEWS CIRCUIT

OW010449 Tokyo KYODO in English 0410 GMT 18 Aug 82

[Text] Tokyo, 1 Sep (KYODO)--A 24-hour two-way circuit went into operation Wednesday between KYODO News Service and BERNAMA News Agency of Malaysia, opening a new era of closer cooperation between the two Asian news agencies.

The new circuit is to be used immediately from the reception and transmission of Asia-Pacific News Network (ANN) news.

It is also expected to be used for the exchange of news between KYODO and BERNAMA under a bilateral agreement of news exchange and cooperation to be concluded shortly.

Takeiji Watanabe, president of KYODO, in a message to BERNAMA General Manager Ahmad Mustapha Hassan, said:

"I extend my heartfelt congratulations to BERNAMA News Agency on its thoughtful initiatives that culminated today in the opening of a new circuit between our agencies."

The occasion, he said, marks a milestone in KYODO's pursuit of expanded news transmissions overseas. The new circuit will contribute largely to the smoother flow of OANA news as well as to increased bilateral news exchanges between BERNAMA and KYODO.

Hassan, also president of the Organization of Asia-Pacific News Agencies (OANA), in his message to Wantanabe, described inauguration of the new circuit as "marking the beginning of a new era of mutually beneficial cooperation."

"It is important not only in the context of our bilateral agreement for news exchange and cooperation, but also in the wider context of closer ties between our countries and peoples."

CSO: 5500/2341

JAPAN TO EXPERIMENT WITH NEW NEWS DELIVERY SYSTEM

OW291331 Tokyo KYODO in English 0837 GMT 29 Jun 82

[Text] Osaka, 29 Jun (KYODO)--An experimental closed-circuit TV station in Ikoma, Nara Prefecture, will inaugurate an epoch-making news delivery system from next month.

It will transmit the latest facsimile news of KYODO news service to 156 monitoring families and seven official organizations in the Ikoma area.

The new visual information delivery service, termed "high ovis" (high interactive optical visual information system) utilizing optical fibers, will provide the latest news for 10-30 minutes every hour from 10 a.m. to 10 p.m. daily for three months to September.

High ovis is being handled by the High Visual Information System Development Association based in Tokyo, an affiliate organization of the Ministry of International Trade and Industry (MITI), which has been working on visual information systems since 1978.

Information, including graphs and figures, will be shown on the screen, together with a commentary by an announcer, a spokesman said.

CSO: 5500/2341

BRIEFS

FOREIGN MINISTRY SATELLITE PHOTOGRAPHY PLANS--Tokyo, 27 Aug (KYODO)--The Foreign Ministry decided Friday to request yen 233,610 million (dollar 920 million) for its Official Development Assistance (ODA) for fiscal 1983, an increase of 11.4 percent over this fiscal year's figure. In order to cope promptly with rapidly changing world situation, the ministry plans to establish within its research and planning department an information division and a research division, he said. To strengthen its information collection and analysis functions, the ministry will increase its "assistants" by 16 and "specialized researchers" by 25. The information division will gather information and supply services around the clock by utilizing computers. At the same time, it will study the collection of information from photos taken by reconnaissance satellites. The research division will collect data available both within and outside Japan and will analyze military, economic and other data, according to the spokesman.

CSO: 5500/2341

PAKISTAN

EARTH SATELLITE STATION AND GATEWAY EXCHANGE FOR ISLAMABAD PLANNED

Karachi DAWN in English 11 Aug 82 p 4

[Text] ISLAMABAD, Aug. 10: An earth satellite station and an international gateway exchange will be installed at Islamabad during the next three years.

The earth satellite station and international gateway exchange will be electronically controlled and these will have in-built system of automatic device for recording duration of the call, the number calling and the number called. Recurrence any chances of leakage of revenue and excessive billing will be plugged.

EXPERTS

Technical experts are available with the T and T department to maintain and operate this highly advanced equipment. Efforts are being made for production of electronic telephone exchanges in the country and it is expected that in a couple of years TIP and CTI will be able to manufacture these exchanges.

The production of these exchanges will modernise the present manual exchanges presently in operation in some parts of the country. The manufacture of these exchanges will save a lot of foreign exchange besides creating new employment opportunities in the country.

Another important project of submarine cable is also being undertaken by T and T in collaboration with UAE. The submarine cable will link UAE with Karachi. From UAE it will provide an alternate system of communication with North America via earth satellite station at UAE.

Presently North America is linked with Pakistan via Europe and through Atlantic only.

The new submarine cable system will be safe and secure means of communication. The project is expected to be completed during the next three years.

CSO: 5500/5906

NANJING STATION TESTS SATELLITE TV TRANSMITTING

OW200700 Nanjing JIANGSU Provincial Service in Mandarin 2300 GMT 18 Aug 82

[Text] The Nanjing satellite communications ground stations, designed and built by our country, yesterday conducted a test of transmitting television programs to half of the world through an international communications satellite. Leading comrades of the Ministry of Electronics Industry, Jiangsu Province and Nanjing Municipality as well as comrades engaged in the research and development of satellite communications visited this ground satellite station fitted out with domestically produced equipment and watched television programs transmitted and received through the international communications satellite.

They said: The result of the test is good. The pictures received were soft, sharp and clear.

The equipment of the Nanjing satellite communications ground station was developed and manufactured by the Najing Institute of Electronic Technology, the Nanjing Hardware Research Institute, the (Xinlian) Machinery Plant, the Changjiang Machinery Plant, the Nanjing Electron Tubes Plant, the Nanjing Telecommunications Equipment Plant, the Nanjing Radio Factory, the Jinling Radio Equipment Plant, the Nanjing College of Engineering and the Nanjing Posts and Telecommunications Institute.

Since the completion of its construction in 1978, the Nanjing satellite communications ground station has conducted three phases of tests: the first phase was (?acceptance testing), the second was [words indistinct] and the third phase was trying out. Since June this year this station has transmitted television programs on a trial basis through the international communications satellite.

The successful test carried out by the station shows that our country's electronics industry has a technical force capable of developing and producing satellite communications equipment mainly with domestically produced materials and devices.

CSO: 5500/2341

BEIJING-HOHHOT SATELLITE PHONE LINK TESTED

OW201711 Beijing XINHUA in English 1605 GMT 20 Jul 82

[Text] Hohhot, 20 Jul (XINHUA)--The Municipal Telecommunications Bureau of Hohhot, capital of the Inner Mongolia Autonomous Region, today successfully made an experiment in telephone communications with Beijing by using an INTELSAT satellite 36,000 kilometers above the Indian Ocean.

A XINHUA reporter on the scene reported that the telephone conversation conducted in the course of the experiment was loud and clear as if people at both ends were in the same city, talking through an inner-city system.

Today's experiment in Hohhot is part of the national project to try the use of the INTELSAT satellite in telephone communications and telegraph, facsimile and television transmissions. The project involves ten Chinese ground stations, of which seven are equipped entirely with homemade equipment and machines.

Tests over the past one and a half months show that the equipment and machines at these stations are up to INTELSAT standards.

On 12 July, people in Hohhot were for the first time able to watch a satellite-transmitted live telecase of the 1982 World Cup Football final match.

But for the satellite, local officials said, they would have had to wait for three days to see a replay of video tapes of the event brought back from Beijing by a special messenger of the autonomous regional television station.

CSO: 5500/2341

BRIEFS

SATELLITE LINK TESTED--Urumqi, 20 Jul (XINHUA)--China has since 10 July successfully conducted an experiment in television and meteorological data transmission between Beijing and Urumqi, capital of the Xinjiang Uygur Autonomous Region, by using an INTELSAT satellite in the Indian Ocean region. The experiment was conducted by a test ground station in Urumqi. Data obtained will be used for the designing and building of a full-fledged station in the city before the end of 1983. China has been conducting from 6 June to 6 August a nationwide experiment in domestic satellite communications and TV transmission by using the INTELSAT satellite. The project involves ten ground stations in Beijing, Shanghai and other places. [Text] [OW201406 Beijing XINHUA in English 1247 GMT 20 Jul 82]

SHANGHAI SATELLITE TV TRANSMISSION--The Shanghai Hongqiao ground station for satellite communications succeeded for the first time in domestically test-transmitting television programs via the international communications satellite 36,000 km above the Indian Ocean on the afternoon of 30 July. Ground stations at Beijing, Xinjiang and Nei Monggol received the transmitted television programs. In a telephone conversation that traveled 72,000 km in space, workers at the ground station in Hohhot, Nei Monggol, said: We are happy to receive the programs transmitted from Shanghai. The color is quite natural, and the pictures on the screen are stable. Both audio and color quality are good. The test transmission was successfully conducted for 2 hours and 40 minutes. All data compiled indicated that the test transmission was a success and that the equipment at the ground stations functioned properly. All this has laid a fine technical foundation for setting up a domestic satellite communications network in China. [Text] [OW011345 Shanghai City Service in Mandarin 2300 GMT 30 Jul 82]

CSO: 5500/2236

PHILIPPINES LONG DISTANCE TELEPHONE EMPLOYS FIBER OPTICS

Manila BULLETIN TODAY in English 9 Aug 82 p 29

[Text]

A new technology in communications called fiber optics will be put in operation, Philippine Long Distance Telephone company (PLDT) said.

Fiber optics, which transmit voice, pictures and signals by using light waves, will be used primarily for long distance service on PLDT overseas network. This will link the company toll facilities at the Intramuros service center with its new communication tower, the company's international gateway, situated near the Manila-Quezon city boundary on España, Sampaloc.

PLDT said this new technology was a gift from Siemens AG of Germany where most of the company's communications equipment were purchased.

Fiber optics is the product of a long process of experimentation and development that goes as far back as 1880, just four years after the invention of the telephone by Alexander Graham Bell.

PLDT also said the fiber optics is still experimental in some countries, used mostly as inter-office trunk which connect switching offices within a region and also as loop lines to connect a number of homes to a central office.

The new technology, however, has not entered many homes since this is very limited and expensive. Besides, copper wires remain the practical material that can handle adequately the information traffic in the average households.

The fiber optics technology is the first "light wave cable" in use in Southeast Asia. At present, only Japan, Germany and the United States are using the fiber optics on a limited basis. They have however, an ongoing development and manufacturing program for fiber optics.

The diameter of an optic fiber is like that of a strand of human hair. PLDT's optic fiber installation will initially transmit 480 voices simultaneously but the fiber itself can carry thousands of simultaneous conversations.

The fiber is approximately five kilometers long and encased in a metal shield with a plastic sheath. With this protection shield, the light wave cable has a size slightly smaller than the average ring finger.

CSO: 5500/5902

TELECOMMUNICATIONS INTEGRATION TO BE PUSHED

Manila BULLETIN TODAY in English 5 Aug 82 p 10

[Text]

All telecommunications facilities for domestic services will be integrated into single, public, nationwide network to serve national, urban and rural requirements.

They should also cover all types of transmission and reception services at the lowest applicable cost and use the latest applicable technology.

This policy was enunciated in the five-year communication development plan adopted by the government.

The inadequacy of communications services in the country can be gleaned from the data which show that the telephone density of the Philippines with a population of almost 50 million is only 0.88 per 100 population, and with services concentrated largely in profitable urban centers.

While Metro Manila has a telephone density of 4.77, other urban centers have 2.25, and the rest of the country has 0.24.

At the same time, under the telecommunications development program, the franchise system will be organized to allow for separate franchise and independent operations for the national long-line backbone system.

It will also integrate the present operators either on an area or regional basis to allow profitable operations in densely populated areas and cross-subsidized services to the outlying rural areas.

Whenever feasible, the use of the newest technology in telephone, the digital (pulse code modulation) system, will be encouraged to guard against early obsolescence of telecommunications systems by the time these become operational. This system reportedly could easily be upgraded to use the latest technology.

Because of the massive funding and borrowing requirements for the development of the telecommunications sector, the government has decided to assist in securing the financing for sectoral programs and projects.

It will also study the feasibility of investing in the sector and then leasing back the facilities to the franchise operators.

All telephone operations will be left to the management of the private sector.

Investments in progressive local manufacturing facilities for exchanges, instruments, terminals and other telecommunications equipment will be encouraged.

Under the program, the telephone facilities in Metro Manila after the merger of the Republic Telephone Co. with the Philippine Long Distance Telephone Co. will be extended to attain a density of 7.4 telephones per 100 persons by 1984.

A computer-analog system will be introduced for better service.

Also to be implemented during the plan period is the rural telecommunications program which, when completed, will provide 30,600 telephones in Regions I and II; 40,000 in Regions III and IV; 30,000 in Regin V; 103,300 in Regions VI and VII; and 170,000 in Regions IX, X, XI, and XII.

A backbone network will employ a computer-digital system for interconnecting the urban centers.

CSO: 5500/5902

BRIEFS

INFORMATION MINISTER BLASTS WESTERN MEDIA--Information Minister Gregorio Cendana denounced yesterday the Western media for trying to impose on the Third World nations. He accused Western newsmen of the most insidious form of intellectual imperialism. He lashed out at the Western media in his address at the meeting of the Thursday Club in Quezon City yesterday. Cendana said the Western media want to condition the Third World to think what the imperialist powers want us to think. According to Cendana, the Western media are presuming to interpret for us events not only in the world but also in our country. The objective, according to the minister, is to dominate the mind, attitudes and beliefs. He called on Filipinos to be skeptical in reading or listening to Western interpretation of events in the Philippines. He said Western newsmen could not seem to report events in the Third World without bias and racial prejudice. [Text] [HK300110 Manila Far East Broadcasting Company in English 2330 GMT 29 Jul 82]

CSO: 5500/2236

SRI LANKA

ENGINEERS' EXODUS THREATENS OVERSEAS TELECOMMUNICATIONS SERVICE

Colombo SUN in English 3 Aug 82 p 1

[Article by Tyronne Devotta]

[Text] **A steady exodus of qualified engineers is threatening to cripple the Overseas Telecommunication Service, Sri Lanka's major link with the outside world.**

Some of the highly qualified men have already left the Department. Others are making plans to go thus forcing officials in the Ministry of Posts and Telecommunications to examine employing engineers from Sweden and Japan. This is as a temporary measure till the staff situation improves.

The Earth Satellite Station at Padukka, the International Telephone Exchange, the Transmission Room and the Telex Exchanges come within the purview of the Overseas Telecommunication Service.

Among those who have already left are the former acting Chief Engineer; the engineer in charge of the Padukka Earth Satellite Station, the engineer in charge of the International Switching Centre (he was trained in Italy and Sweden in this field), and the engineer who was an expert on software management.

The Ministry of Posts and Telecommunications is also examining the possibility of seeking technical assistance from friendly countries to train personnel in various fields.

Ministry sources explained yesterday that even if new hands are recruited, it would be some time before they are trained adequately. During this period it was imperative to ensure that existing services do not deteriorate or the machinery gets into a state of disrepair.

CSO: 5500/5897

BRIEFS

FRG-AIDED TRANSMITTING STATION--The Sri Lanka Broadcasting Corporation's [SLBC] transmitting station serving listeners on medium wave was opened on 17 July at Mahayayagane by Minister of State Anandatissa De Alwis. The transmitting station, opened on 17 July, is the 22d of such stations being put up by SLBC with FRG assistance since 1967. Three more stations are to be opened under this program at Ratnapura, Ambawala and Kantalai before the end of 1982. [Colombo International Service in English 1045 GMT 18 Jul 82]

CSO: 5500/2236

BRIEFS

'CNA' COMPUTERIZED SERVICE--Taipei, 16 Jul (CNA)--The Central News Agency Corp will introduce computerized Chinese language news service to local subscribers. A demonstration was held Wednesday for representatives of newspapers, broadcasting stations and television stations at the CNA Headquarters Office at the Chihching Building on Sungchiang Road. In order to provide better service to subscribers, Pan Huan-kun, president, said that the CNA will begin the computerized news service 1 April next year. CNA computerized its sending of Chinese language news to the United States beginning 26 January this year and results have been quite satisfactory, Pan said. The computerized operation can send 600 words per minute, compared to the current speed of one page (about 200 to 400 words) over 3 and 1/2 minutes through facsimile. The new way of news supply will cover Taipei, Taiwan Province (excluding remote islands) and Kaohsiung. [Text] [OW181738 Taipei CNA in English 1334 GMT 16 Jul 82]

CSO: 5500/2341

SRV'S NORTHERN PROVINCES HOLD RADIO CONFERENCE

OW031120 Hanoi Domestic Service in Vietnamese 1100 GMT 2 Jul 82

[Text] A conference on radio and wired broadcasting in the eight mountainous northern provinces of Quang Ninh, Lang Son, Ha Tuyen, Cao Bang, Hoang Lien Son, Bac Thai, Son La and Lai Chau was held in Quang Ninh from 27 to 29 June 1982.

The conferees heard Comrade Ly Van Sau, vice chairman of the Central Radio and Television Commission, report on the development of radio and wired broadcasting in the mountainous northern provinces.

The conference reviewed and stressed the role and responsibilities of the radio and wired broadcast sector in popularizing and explaining the lines, viewpoints and policies of the party and the state, especially the nationalities policy, and in organizing and encouraging emulation movements for labor productivity and bomat readiness in the mountain areas.

At present, communications in the mountainous northern provinces are difficult and delivery of newspapers is tardy; the compatriots there are suffering privations and the enemy is feverishly stepping up his psychological warfare against our people. Only through radio and wired broadcasts can our propaganda work be carried on in a fast and most effective way. However, whereas the radio and wired broadcast networks of some provinces such as Guang Ninh and Lang Son are operating pretty well, those of other mountainous border provinces and districts remain inadequate and the quality of their operations is poor.

To rapidly develop and improve radio and wired broadcasting in the mountainous areas, delegates from the eight provinces unanimously stressed the need to strictly implement the motto "The central and local levels and the state and the people cooperate in promoting the radio broadcast undertaking."

The conference set forth measures and the immediate tasks in radio and wired broadcasting in the mountainous areas.

The markets in the mountainous border areas, with thousands of customers gathered joyfully on each market day, are important areas favorable for mass information work. We must promptly set up stationary wired broadcast stations with proper electric power. The content and form of radio and propaganda programs should be compatible with the characteristics, languages, psychology and cultural level of the compatriots of various nationalities and there must be special folksong programs for each nationality, besides relaying the central radio broadcasting station, the radio and wired broadcast programs in the languages of local nationalities by taking into account the respective characteristics of these nationalities and as decided upon by the local party committee echelons and administrations.

The radio stations in the mountainous areas should also promptly form or improve their corps of correspondents and editors of ethnic minorities recruited from among collaborators, cadres and employees of local state forests and farms who have some knowledge about journalism. The party committee echelons, administrations and sectors concerned should actively assist these radio stations in promptly implementing this task.

The conference closed in an atmosphere of enthusiasm with the signing by the radio stations of the eight provinces of an agreement on emulating efforts to improve the quality of radio and wired broadcasting. The emulation drive will initially be reviewed by the end of September and ultimately be assessed in early December this year.

CSO: 5500/2341

BROADCAST NETWORK AUTOMATION VIEWED

Prague PPT REVUE in Czech No 3, 1982 pp 79-81

[Article by Eng Jan Bubak, CSc, Research Institute for Communications, Prague: "Automation of Broadcast Communication Network Operation"]

[Text] In the era of scientific and technical revolution automation of procedures and processes is becoming an important tool of technical progress expanding into more and more areas. One of these areas is broadcast.

The reason for introducing automation into this field is the sharp development of broadcasting--there is a considerable number of transmissions from the field, exchange of programs between studios is becoming constantly more intensive, international transmissions are on the rise. An important role is also played by the increasing number of broadcasted programs. It can be stated in general that both the number of program sources and their corresponding receivers is increasing as is, naturally, the number of transmission routes among them. In dispatching of programs at dispatching centers or in connecting broadcast channels at broadcasting exchanges there occur considerable fluctuations in operation that are sometimes hard to handle. The operators of such centers often work under stressful situations and errors in manipulation occur easily. As an example can serve the fact that on the occasion of the world ice hockey championship the broadcast center in Prague had to simultaneously connect 50 broadcast channels and 40 intercom circuits. Handling of emergency situations (transmission route breakdowns, etc.) already taxes the limit of human capabilities.

Dealing with this situation by increasing the number of operating personnel is, on the one hand, in direct contradiction with the manpower shortage and the efforts to improve the efficiency of operations. On the other hand, it does not, as a rule, produce the desired effects, because it inevitably leads to fragmentation of operations, reduced ease of orientation and control. Thus, the solution must be sought in automation.

Automating the operation of the broadcast communication network, in addition to doing away with the mentioned hard-to-handle operational situations, would also bring about improved reliability because it would eliminate manual operations which are a significant source of breakdowns (faulty manipulation accounts for 40 percent of breakdowns in transmissions). In the case of important transmissions it would be possible to introduce a permanent operational control with automated switching to reserve channels. It would also considerably simplify switching to network operation under emergency situations. Another advantage would be saving of broadcast channels in view of their efficient and optimum utilization. Automation could also be used to measure channels during regular maintenance. Finally, automation could also be used for operational record keeping, billing and message accounting, etc.

Principles of Broadcast Communication Network Automation

Certain important requirements have to be met in the automated operation of a broadcast communication network. First of all, on maximum reliability of automated connections is required, because a wrongly connected broadcast transmission cannot be repeated (as is the case during recording in the studio). Further required is the correct timing of the transmission at the time of the connection. However, the transmission cannot be switched on immediately prior to the scheduled moment, as an eventual defect would not be discovered until after the program failed to reach its destination. Thus, the connection must be established ahead of time and, by means of control equipment, and means ensured in case of some defect for it to be switched to an alternative route. Important transmissions must be automatically monitored (operational control) and, in case of defect, are also transferred to an alternate route. After completion of transmission the channels must be uncoupled at the appointed time, but in case of need a provision must be made for prolonging the transmission. Automation of these basic functions must be combined with automation of measurements, maintaining records of transmissions and billing fees for transmissions.

In view of the mentioned requirements, control of communications must avail itself of the most modern method--control by computer. This system is particularly suited for Czechoslovak broadcasting centers which are equipped with cross-coupled communication fields with reed relays and coordinates selection. Access to a control computer is envisioned for the communication organization (highest priority) and, through data circuits, also for broadcasting and television organizations.

Structure of Broadcast Communication Network and Control System Configuration

The broadcast communication network in the CSSR is decentralized into a larger number of broadcasting centers (up to approximately 15 in the future). The broadcasting centers are connected via a spider network with the central exchange in Prague and, in addition, the centers are interconnected by a partial grid network. The broadcasting centers will have to connect a total of approximately 2,000 broadcast channels. In addition to broadcast channels there is also need for connecting intercom circuits (usually 1 to 2 intercom circuits for each broadcast connection during some domestic transmissions). It is envisioned to implement the so-called complex communications (broadcast channels simultaneously with intercom circuits). The daily standard for transmissions amounts to hundreds of them.

The control system will have to be adjusted to the mention structure of the network and the mode of operation. The network must be controlled from a single center which has data regarding the structure of the entire network, number of channels, their type, their allocation, etc. The control computer must be located in this center. However, direct control of all centers of the decentralized network by a single computer would cause a disproportionate increase in requirements on the system of data transmission and the decoding and control system in individual centers. Therefore more advantage is offered by a system using a single central computer with which cooperate subordinate simple satellite computers in individual broadcasting centers. These satellite computers merely control connecting of signal generators and consumers in the given cross-coupled field on instructions from the central computer. For that reason the satellite computers need but a low-capacity memory and simple accessories.

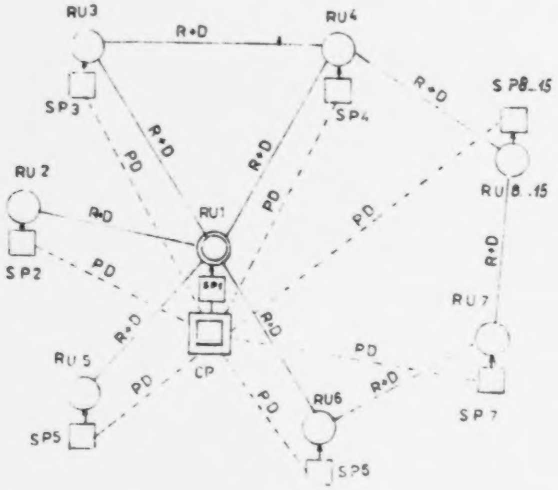


Figure 1. Configuration of the Control System

Key:

RU - Broadcasting center
CP - Central control computer
SP - Satellite control computer
R+D - Broadcast channels, intercom circuits
PD - Data transmission

Configuration of the broadcast communication network with decentralized control is shown in Figure 1. Fourteen broadcasting centers RU 2 through RU 15 are connected via broadcast channels and intercom circuits R+D through a spider network with the main exchange RU 1. Some centers are interconnected directly. Each of the 15 centers is controlled by a small satellite control computer SP 1 through SP 15. All satellite computers are controlled by the central computer CP by means of a special network of data circuits PD.

Functioning of the Control System

Functioning of the control system can be seen in Figure 2. which shows a simplified layout of connections of the central computer with two satellite computers.

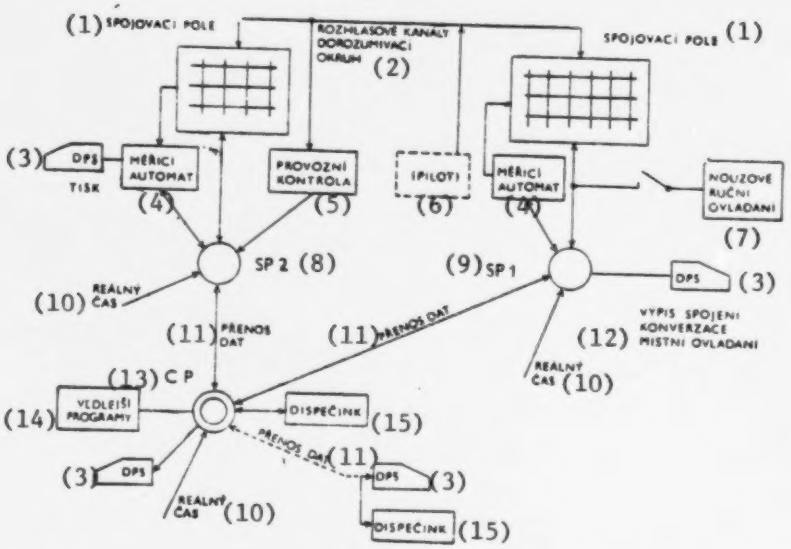

(1) SPOJOVACI POLE
ROZHLASOVÉ KANALY
DOROZUMIVACI
OKRUH (2)
SPOJOVACI POLE (1)
(3) DPS
TISK
MĚRICI AUTOMAT
(4)
PROVOZNI KONTROLA
(5)
(PILOT)
(6)
MĚRICI AUTOMAT
(4)
NOUZOVÉ RUČNI OVLADANI
(7)
SP 2 (8)
(9) SP 1
DPS (3)
(10) REALNY ČAS
(11) PŘENOS DAT
(11) PŘENOS DAT
VYPIS SPOJENI
KONVERZACE
MISTNI OVLADANI
(12)
REALNÝ ČAS (10)
(13) CP
(14) VEDLEJŠI PROGRAMY
DISPEČINK (15)
PŘENOS DAT (11)
DPS (3)
(3) DPS
REALNÝ ČAS (10)
DISPEČINK (15)

Figure 2. Functioning of the Control System

Key:

1. Communication field
2. Broadcast channels
3. Teletype
4. Automatic meter
5. Operational control
6. Pilot
7. Emergency manual control
8. Satellite computer 2
9. Satellite computer 1
10. Real time
11. Data transmission
12. Connection printout
    Conversation
    Local control
13. Central computer
14. Subprograms
15. Dispatching

All requests for transmission are fed into the central computer by teletype or display units locally, or by data circuits from remote subscribers. Requests for transmissions are submitted in the prescribed form several days (e.g., 7) ahead of time, at the latest, e.g., 30 minutes prior to the required time of transmission. The computer has in its memory stored the layout and types of all broadcast channels in the CSSR. The computer checks whether the requested transmission can be implemented and provides a positive or negative answer. The request is then stored in the central computer memory. The central computer gives with a certain time lead instructions through the data circuits to satelite computers for connection (e.g., several hours ahead of time). Satellite computers store these instructions in their memory and print out the prepared transmissions in chronological sequence on teletype which, in case of breakdown of the automated system, facilitates transfer to emergency manual operation. The central computer and satellite computers operate in real time. Immediately prior to the start of transmission (e.g., several minutes) the satellite computers connect in the cross-coupling switchboards of broadcasting centers the requisite channels. At the same time they check by means of a test transmitter and receiver (automatic meter) whether the connection can get through. Satellite computers inform the central computer whether a channel can or cannot be cleared and the central computer eventually finds an alternate route and reports the defect. The transmission is terminated at the required time. In case of need, the central computer may be additionally informed of the need to prolong, shorten or cancel the transmission. The teletypes of satellite computers designed for providing a printout of prepared and implemented connections can also be used for local control and for conversations with the computer. The central computer is further equiped with an input and output for subprograms (accounting, statistics, etc.).

The central computer also controls the regular measuring of channels according to scheduled maintenance requests. It again uses the satellite computers which collaborate with automatic meters at each broadcasting center. The results of measurements are printed out or can be transferred to a designated point.

Important transmissions can be continuously monitored by a remote control system.

From what has been said it is clear that automation can be applied to building up of connections the partial components of which terminate directly at the broadcasting centers, meaning among broadcast channels or broadcast channels with local busbar lines to broadcasting and television organizations. Which means that it will not be possible to build up connections for some occasional transmissions when the connection is built up of line sections, e.g., in the local telephone network, etc. In that case the control system must provide at least for informing in time all the points that will participate in implementing the connection.

Implementation of the System

The described control system is not just some interesting theoretical possibility. At the present time, the Toll Cable Administration, Tesla Electroacoustics and the Research Institute for Communications are collaborati collabroating in its implementation.

The programmed control unit type Tesla JPR 12 R will be used as satellite computer for control of transfer switchboards in individual centers. The unit JPR 12 R is a 16-bit minicomputer with operational ferrite memory capacity of 64 KB (1 KB - 1,024 byte), assembled of modules with 16 KB each.

This type of minicomputer was selected primarily because of its high reliability in comparison with other minicomputers and becasue of its low price. Another advantage is the wide assortment of available units for contact with the controlled object (available are, e.g., plates with static and dynamic digital outputs, all-purpose connecting plates, analog-digital converters, digital clock connections, etc.). The connecting units are located with the computer in the same housing. An important factor in the selection of a computer type was the experience of the producer of broadcasting centers (Tesla-Electroacoustics) who used an older type of this computer (JPR 12) for control of studio switchboards.

To expand the capacity of computer memory, use will be made either of the flexible disks (discettes) MOM 3200 with a capacity of 256 kbyte or casette tape memories KPP 800 with a capacity of 200 kbyte.

Development of equipment for cooperation of the satellite computer with the broadcasting center (contact units) was contracted out to the concern enterprise Tesla-Electroacoustics in Bratislava. The extant manual control of cross transfer switches in broadcasting centers is done from a control panel. Connection of cross points (reed relays) occurs through coordinate control by means of sets of push buttons for hundreds, tens, and ones. Disconnecting is controlled by cancel keys connected in selfsustaining circuits of cross relays. Outputs from the atuomatic control system are adapted to this control system--to each selection button is connected the connecting contact of the reed relay in a contact unit in parallel, and with each cancel key is connected in series with the disconnecting contact in a contact unit. At an exchange capacity of, e.g., 100 inputs, 50 busbars, 100 outputs that translates into connecting 70 relay connecting contacts in parallel and 150 relay disconnecting contacts in series. These functions, for all practical purposes, are carried out by means of dynamic digital output plates DDV (in the case of connecting contacts) and are supplied by the computer manufacturer, and busbar register plates with relay units (in the case of disconnecting contacts) which will be supplied by Tesla-Electroacoustics. All contact units will be located either in a common housing (1,792x600x725 mm) with the computer and additive memory, or in an adjacent housing of the same dimensions (for large exchanges).

No decision has been made as yet in regards to the type of the central computer. As a suitable type appears to be some of the minicomputers of the series ADT 4000 (Plants for Industrial Automation Trutnov) or some type from the series SMEP [system of small electronic computers] (SM 3, or SM 4). Supplemented by external memory of a higher capacity, the described type JPR 12 R might also do. The requirements on memory are approximately as follows: operational memory at least 64 KB, external memory on the order of MB.

Control of broadcast channel clearance will be done by means of a set consisting of an automatic transmitter and a broadcast channel meter which will be produced under the designation ANS 1 in the near future (1983) by Tesla-Hloubetin. The set is controlled by microprocessors and can handle several fixed programs as well as introduction and clearing of several random programs. The set of fixed programs includes the so-called short program mono, short program stereo, long program mono and long program stereo. For example, the short program mono, which lasts 5.64 s, includes measurement of nominal transmission level, attenuation distortion at 3 frequencies, noise, harmonic distortion at 2 frequencies. This short program is an excellent means which will facilitate control of channel clearance prior to transmission. The control system for connecting channels in the cross-coupled field will make it possible to connect the set's receiver to the incoming channel. Actual assesment of the results of measurements will be done by the set's receiver which will pass on the result to the control system. Eventual transfer to a reserve channel is carried out by the control system.

Connecting of the set's transmitter and receiver will make use of the cross-coupled connecting fields of broadcasting centers in which some inputs or outputs will be reserved for the set's transmitters and receivers.

The same principle will be used for automatic maintenance of channel measurement. Requests for measuring will be handled by the control system the same was as requests for transmission. The long programs will be used for measurements. The long program stereo lasts 10.4 s and includes measurement of the nominal transmission level, attenuation distortion at 15 frequencies, harmonic distortion at 4 frequencies, intermodulation distortion at 3 combinations of frequencies, crosstalk between channels at 3 frequencies, noise, level and phase differences at 15 frequencies. The results of these measurements are retained in the memory of the automated set wherefrom they can be displayed, printed out, transmitted or recorded by a casette recorder.

It is envisioned to use 2 principles for the system of operational control. The first is a system comparing two signals--from operational and alternate routes. The basic element of this system is the switch-over unit EIP 215 (Tesla-Electroacoustics). Under consideration is also a system using a pilot frequency in the vicinity of 320 Hz which would be combined with a signal at channel input and analyzed at channel output--this system is currently being verified from the viewpoint of subjective interference.

Independent noncommutated data circuits will be used for data transmissions between the central and satellite computers. It is envisioned to use 200 Bd modems Tesla MDS 200 and operation in echo-system (reverse transmission of each character already stored in computer memory and again read from the memory). This system will make it possible to eliminate errors during transmission and eventual errors during storage into the memory.

As a breakdown of the control system cannot be excluded, provisions will be made for automatic switching to manual operation of broadcasting centers. This transfer will be tied in each computer to an incorrect result (symptom) of a suitable testing program which the computer constantly repeats during waiting periods or prior to implementation of each connecting instruction.

An equally important component of the system as the so far described equipment (hardware) is its program equipment (software). Software for cooperation of satellite computers with the broadcasting center (storage of requests for transmissions 24 hours ahead of time, their implementation in real time, automatic control prior to transmission, automatic measurement, the computer's own testing for defects, etc.) is being worked out by the Research Institute for Communications. No decision has been made as yet about software for the central computer, as the requisite capacities for analysis and programming will be considerable.

Project Stages

Implementation of the system can be divided into 3 stages:

In the first stage will come development of units for contact between the satellite computer and the broadcasting center, then will be devised suitable software followed by experimental operation of the center controlled by the satellite computer, to include the automatic measuring system. It is expected that trial operation will commence in mid-1983.

In the second stage the broadcasting centers will be gradually equipped with satellite computers. The centers will be controlled by local generation of connecting instructions according to the guidelines of the central outlet of the Toll Cable Administration. There will be a gradual transition to providing instructions remotely from central dispatching via data circuits as preparation for the last stage. The second stage should last approximately 5 years.

In the last, third stage will come implementation of the central computer system's hardware and software. Remote transmission of connecting instructions from central dispatching of the Toll Cable Administration will be replaced by remote control by the central computer. Requesting of transmissions by teletype from central dispatching will be replaced by making requests directly to the central computer.

Economic Features of the System

Preliminary analyses showed that implementation of the complete system should bring about savings of approximately 20 to 30 personnel (savings in operation of transfer switches, measurements, dispatching), which amounts to approximately Kcs 1 million in labor cost annually. Increased revenue for transmissions should amount to Kcs 3.5 million a year (higher network capacity).

The cost of equipping one broadcasting center with a satellite computer, contact units and accessories (teletype, modem MDS 200, flexible disk memory, perforated tape reader) will amount to approximately Kcs 500,000 i.e., about one-tenth of the cost of transmitting and connecting equipment of the broadcasting center.

The price of the central computer with accessories can be estimated to be approximately Kcs 1.5 million.

From the mentioned relations it is obvious that investment made into the system will be recovered in a relatively short time.

These economic advantages are accompanied by improved relaibility due to elimination of handling errors--average time between defects will increase twofold even without introduction of the operational control system, after the latter's implementation the failure rate will register another substantial decrease. The stress situations during handling of peak fluctuations in oper operation mentioned in the introduction, will be gone. Precise and reliable automatic measurements will make it possible to preclude equipment failures in time. Additional savings will be generated as the result of the potential simultaneous automation of administrative tasks connected with ordering and billing of transmissions.

8204
CSO: 5500/3013

BRIEFS

INFORMATION EXCHANGE VIA TELEVISION--A regular exchange of televised information between Czechoslovakia and Afghanistan, via the Intervision Network, opened today. The reports sent from Afghanistan today showed Karmal meeting representatives of political and economic organizations, and pictures of normalization of life in the Afghan countryside. [Summary] [LD221557 Prague Domestic Television Service in Czech and Slovak 1955 GMT 21 Jul 82]

CSO: 5500/2341

BRIEFS

CHILDREN TRAINED IN RADIO COMMUNICATIONS--The Second Young Pioneer Championship Tournament for young radio operators in the GDR was concluded in Prerow today. The final requirement was the multiple radio operating contest generally referred to as the "fox hunt." With the help of radio direction finders the Young Pioneers attempted to locate hidden transmitters. The mission was very difficult; it was certainly no easy task for the participants to detect and locate transmitters in the Darss forest. Some 84 pupils, including 14 girls from grades 5 through 8, participated in the tournament. Yesterday the multiple-signal contest was held in which radio transmitters had to be set up within the shortest possible time. The participants had to send and receive messages quickly and reliably. The Second Young Pioneer Championship Tournament formed the high point at the second camp for young radio specialists organized and held by the FDJ and the GST. [Text] [DW110949 East Berlin Domestic Television Service in German 1730 GMT 8 Aug 82]

CSO: 5500/2236

RADIO SOLIDARITY BROADCASTS IN WARSAW AGAIN

NC132155 Paris AFP in English 2145 GMT 13 Jul 82

[Text] Warsaw, July 13 (AFP) -- Radio Solidarity broadcast again in Warsaw tonight and confirmed that several of the pirate radio station's staff had been arrested in a police operation July 5. The radio of the suspended independent trade union federation Solidarity also said it would close down for two months. After a few minutes the broadcast was suddenly cut off and replaced by pop music.

On Sunday Polish television announced officially that "Radio Solidarnosc" had been dismantled. It said seven people had been arrested, including a Belgian who was charged with giving clandestine members of Solidarity a new transmitter hidden in medical equipment.

Until tonight, Radio Solidarity, which first broadcast on April 12, had not been heard since June 8 when police seized the station's former transmitter from the top of an elevator shaft in a Warsaw residential building. Earlier today, pamphlets thrown from the top of a building in downtown Warsaw announced the new broadcast, which started at 2000 GMT.

The radio said it was going off the air for two months because of "the particular situation" in the country. This apparently was an allusion to the decision by Solidarity's underground leadership to suspend all protest activities in advance of Pope John Paul II's visit to Poland and as a show of goodwill to Polish authorities.

This was the first time a Western-made transmitter had been used by Radio Solidarity. It was operated by Polish engineers belonging to Solidarity, the radio said. Recalling that Poland had signed international conventions guaranteeing freedom of information, the radio said it aimed to break the Polish authorities' news monoploy. "Human rights are an international affair," the radio said, adding that Western nations were entitled to help Poles who wanted to make sure liberties guaranteed by the conventions were respected. "We are fighting for Solidarity's existence and for a social entente which would serve as a basis for normalizing social relations" and "which could help overcome the economic crisis," the radio said.

The radio's April 12 broadcast was not jammed. But succeeding programs, which starting in May were transmitted every Sunday, were drowned out with pop music by a powerful, unidentified transmitter. However the station was picked up in some sections of the capital.

On June 8 police seized a transmitter and arrested two people. Following that, the station went off the air. But other clandestine transmitters were functioning in various cities, particularly Gdansk and Poznan.

CSO: 5500/2236

SFRY RADIO DIRECTOR HOLDS TALKS IN TUNISIA

LD280322 Tunis TAP in French 1300 GMT 27 Jul 82

[Text] Tunis, 27 Jul (TAP)--Mr Zdravko Pecar, director general of the International Broadcasting Station Radio Yugoslavia, who is visiting Tunisia, has held talks with top-ranking officials of Tunisian Radio-Television (RTT).

The talks have been held within the framework of the cooperation agreement between RTT and Yugoslav Radio-Television (JRT), concluded last May, which is a direct outgrowth of the cooperation links, union of work and agreement advocated by the committee for cooperation among broadcasting institutions from nonaligned countries, including Tunisia and Yugoslavia.

The talks between Mr Pecar and the management of RTT focused on technical cooperation between RTT and JRT. During the talks Mr Pecar expressed Radio Yugoslavia's intention to increase the range of its external broadcasts. In this connection, RTT promised to conduct a systematic audibility survey of Radio Yugoslavia's broadcasts to North America.

The Yugoslav side assured RTT of its full support for all actions undertaken to ensure a wider range for Voice of Tunisia broadcasts. This is why RTT will be allowed to use the technical facilities of Radio Yugoslavia to broadcast programs earmarked for Europe over shortwave transmitters in Yugoslavia as soon as they are operational.

Also discussed during this visit were all issues concerning technical coordination for the adoption of a common RTT-JRP position at international conferences devoted to planning and distribution of frequencies.

CSO: 5500/2341

BRIEFS

SATELLITE STATION--Ivanjica, 17 Aug (TANJUG)--Works are underway on the construction of the new "Jugoslavia II" satellite station near the existing "Jugoslavia I" station in the vicinity of Ivanjica, southwestern Serbia. The works are expected to be completed by the end of 1983. That is in time for the Winter Olympics to be held in 1984 in Sarajevo, the capital of the Yugoslav Constituent Republic of Bosnia and Herzegovina. The new satellite station will have [word indistinct] links with a satellite over the Indian Ocean. The station will enable automatic telephone, telegraph and television links between Yugoslavia and Australia and the Far East--China, Japan, Indonesia and other countries. Approximately 300 million dinars (approx. 48 dinars to the dollar) will be (?invested) in the construction of this telecommunications facility. [Text] [Belgrade TANJUG in English 1711 GMT 17 Aug 82]

CSO: 5500/2236

BRIEFS

NEW TELECOM PRESIDENT--Herman Gonzalez Sorzano has been sworn in as president of the National Telecommunications Enterprise, Telecom. He replaces (Guillermo Sagra). [Bogota Domestic Service in Spanish 1730 GMT 17 Aug 82]

CSO: 5500/2236

BRIEFS

PUBLIC SECURITY ASKS NEWS MEDIA COOPERATION--Angel Edmundo Solano, Costa Rican public security minister, has asked Costa Rican and Nicaraguan news media to cooperate with their respective governments to maintain harmonious relations. Some news media had referred to Minister Solano as making statements harmful to Nicaraguan-Costa Rican relations. This prompted Minister Solano to issue a communique in which he explained his participation in the meeting of Nicaraguan and Costa Rican authorities in Granada. One of the things I said was that the Nicaraguan authorities should try to stop reports and comments hostile and disrespectful to Costa Rica, Solano said in his communique. I have not denied at any moment the participation of the Sandinists in the Honduran Air Service, Inc--Sahsa--sabotage. I consider that the matter has been placed in the hands of the appropriate authorities to handle as quietly as possible. That is why I thought it was better not to refer to this anymore, Solano explained in his communique. He also denied that he had handed over to Nicaraguan authorities recordings containing the statements of the Nicaraguan diplomats involved in the Sahsa terrorist act. Solano also explained that one of the main objectives of the meeting with Nicaraguan authorities in Granada was to have guerrilla commander Tomas Borge officially announce the right of Costa Rica to navigate the San Juan River, as established in the Canas-Jerez Treaty and the Cleveland Ruling. [Text] [PA100413 San Jose Radio Reloj in Spanish 0100 GMT 10 Aug 82]

FORMATION OF COMMUNICATIONS COUNCIL SOUGHT--At a meeting with publicity agencies, media directors and publicity experts, President Luis Alberto Monge expressed the need to establish the Costa Rican Council for Communications as an advisory agency for the president so that he can consult, agree on and coordinate the activities of the private and public sector concerning matters of information and communication. This council would be made up of authorized representatives, professionals of communications, directors of information, publicity experts,the church's media commission, poll takers, educational centers and the government. According to Monge, it will be an organization with many members and wide representation. Monge said that the council for communications will be an organization where we can all express our views democratically. The private and public sectors as well as institutes, centers and associations of public interest devoted to the development of participative communications will be able to exchange their views. This council would draft policy options, plans and programs; conduct investigations; promote professional training; carry out studies on technical aspects of communications; and unite efforts to guarantee the full exercise of our sovereignty in the radio sector and strengthen our democratic system [word indistinct] freedom. Monge told the publicity experts that publicity, an important aspect of modern communications, is also in crisis. He stressed that instead of having publicity geared to raising consumption, circumstances demand information that gives guidance to consumers. He said that the political dimension of publicity is more important than its commercial and economic dimension. He said that the instruments of information and the techniques for persuasion must serve moral and civic values that support our democratic culture. Monge said that in times of crisis, publicity has a crucial value as a tool for political education. [Text] [PA280434 San Jose Radio Reloj in Spanish 0100 GMT 27 Aug 82]

EFFORTS TO COUNTERACT MEDIA 'CAMPAIGN'--Costa Rican Foreign Minister Fernando Volio has announced that the government will adopt several actions to counteract a campaign to discredit Costa Rica at the international level. He said that an attempt is being made to present Costa Rica as the promoter of movements to hurt other nations. The media in several countries are being used for this, and the government is worried about it. Since this is a matter that is being orchestrated ideologically by leftist groups and governments interested in discrediting the country's good name, the government is identifying several ways to face this campaign, Volio added. However, the government is facing a great difficulty in confronting this campaign; a lack of funds. Meanwhile, those interested in presenting Costa Rica in a different way are investing millions [words indistinct] we don't have enough resources to counteract this offensive. But we will do everything possible and use every means available to the country to prove that this campaign against Costa Rica is motivated by political and ideological interests. [Text] [PA280359 San Jose Radio Reloj in Spanish 0100 GMT 27 Aug 82]

CSO: 5500/2236

BRIEFS

PERUVIAN SATELLITE STATION NEAR BORDER--The international affairs committee of the legislature has received the acting manager of the Ecuadorean Telecommunications Institute, a Foreign Ministry delegate and Gen (Jose Maria Albucar), representing the armed forces, to discuss a report received by the committee to the effect that Peru has established a satellite broadcasting station near Ecuador's southeastern border. The meeting was confidential. The ground station has reportedly been installed in an area that was not demarcated under the Rio de Janeiro protocol. The officials were summoned to allay the concern that this report has generated among committee members. [Text] [PA170455 Quito Voz de los Andes in Spanish 1130 GMT 16 Jul 82]

CSO: 5500/2236

BROADCASTING SERVICE OFFICIAL EXPLAINS WORKING OF GBC

Georgetown SUNDAY CHRONICLE in English 1 Aug 82 p 5

[Text] HAVE you ever tuned in on the Guyana Broadcasting Corporation while on a trip to the North West District or some interior location?

The chances are that you did not get a good reception and that, as a result, you let go a couple of brickbats at the local radio stations. Indeed, many residents living in the hinterland have been hurling abuses at the GBC for not providing them with a good service.

But get ready for a surprise: Guyana Broadcasting Corporation's Chief Engineer Ron Case says the abuses are unfounded and based on the mistaken knowledge that the GBC serves the whole of Guyana

He explained that GBC's medium wave service extends more or less along the coastland - from somewhere above Charity, Essequibo, moving in a slight arc to as far as Skeldon, Corentyne. (See Map).

In addition, the Corporation's franchise covers Linden and Wismar, made possible because of a transmitter in the area.

Cde. Case told the "Sunday Chronicle": "It doesn't mean that people outside of these two areas won't get reception, but such reception is entirely dependent on varying factors. What GBC is concerned about is that we provide a proper service in the area that it has been designed to serve.

"In other words, GBC is not claiming to provide a service beyond the areas specified. We do not cater on the medium wave band for listeners outside this contour."

During an interview Ron Case talked about a lot of things which he felt some members of the public were not too clear about. Here are some of them:

Question: Why can't GBC serve the entire country?

Case: Because it would need either more powerful transmitters or an increase in the number of outlying transmitters. In case one the relationship between transmitter power and signal strength is such that the latter varies directly proportional to the square root of the former, so that a fourfold increase in transmitter power will result in a two-fold increase in signal strength.

Take the case of Linden; before transmitters were installed there, the power of the Sparendaam transmitter in Linden was about one-tenth of what it should be to provide satisfactory listening, so that if Linden was to be served from Sparendaam the transmitter power would have to be increased 100 times. The initial costs for this would be prohibitive, but the demand on power greater.

"Additional outlying transmitters require telecommunication and other infrastructure, if anything other than a mediocre service is to be provided, he said.

What about the Short Wave?

Case: Short Wave transmission is principally for long distances, but has been adapted to national broadcasting mainly in countries where the infrastructure does not exist to support broadcasting in other bands. As soon as that infrastructure comes into being, you are supposed to change to a system of local stations either on the medium wave or VHF band. Hence national short wave broadcasting is just meant to be a stop-gap measure. It has never been intended to provide a first-class service, it is not doing that and it never will. At its best it is poor and unreliable.

Cde Case explained that the GBC is providing three services - FM (or VHF Very High Frequency), Short Wave and Medium Wave, each having very different characteristics.

FM waves travel in straight lines, and as such as limited by the horizon, therefore the service area depends on the elevation and power. The quality of this service is good but it requires expensive infrastructure and relatively high cost receiving sets.

Short wave signals are unreliable because they bound between the ionosphere and and earth, and their reception depends on the state of the ionosphere which is continuously changing. Because the signals are fired into the air and reflected from this sphere one can cover long distances with small powers.

The quality of this service is poor because apart from the above mentioned constraints, stations are packed closer on these bands, and receivers become pretty expensive if they have the ability to discriminate between the wanted and the unwanted stations.

Medium Waves follow the curvature of the earth and provide a fairly good signal until they become so weak that they can no longer overcome atmospheric and other unwanted noises and interference. This is the backbone of most broadcasting systems and requires relatively cheap receivers for their reception.

He further explained that there is technically no difference between "Channel One" and Channel Two" except that because one is a higher frequency, it covers a smaller area.

Two Thursdays ago Channel One AM went off the air and resumed service the following Sunday (Incidentally AM means Amplitude Modulation and generally relates to the Medium Wave Band).

Cde Case explained that the Channel One disruption was the result of an accumulation of problems over many years and, more recently because of frequent load-shedding. In fact this piece of equipment like most others in the GBC is obsolete and beyond economic repair. Added to this is an acute shortage of spares.

The problem he said was compounded by the accidental damage to a feeder cable which was cut by weeders. It was no question of local engineers not being able to find the fault, he emphasized. Should a new unit be obtained soon, the reliability of Channel One would be improved.

Another subject he cleared the air about was "jamming" - a term used by people when their programmes are blotted out by another radio station.

Cde Case said that there is intentional "jamming" and unintenional "jamming". He pointed out that both on the Medium and Short Wave bands, stations have to share frequencies or channels because there are many more stations than channels, and in areas where your own signal strength is weak some other station will be heard.

The interferring station does not have to be on the same channel; quite often the strength of the interfering station and the inability of the receiver to detune the unwated signal is the problem.

Cde Case explained "Our national objective is to provide a reliable and proper service to all parts of Guyana but we cannot do this at present because of the above-mentioned constraints... It is our hope that the indirect benefits of broadcasting particularly to the rural areas would give it the priority it deserves so that plans for the expansion of the service (and a service it is) would materialize in the very near future.

"If we fail to use the frequencies which we are allocated they will be taken away, and further more those which we now have would serve an ever decreasing area as the power of transmitters in other countries increases.

CSO: 5500/7560

NICARAGUA

BRIEFS

GOVERNMENT APPOINTS TELECOMMUNICATIONS MINISTER--The Junta of the Government of National Reconstruction has appointed Capt Enrique Schmidt minister of telecommunications and postal services of Nicaragua. Schmidt was director general of the Nicaraguan Telecommunications and Postal Services Institute [TELCOR], in charge of guaranteeing Nicaragua's communications with the rest of the world. [Text] [PA152325 Managua Radio Mundial in Spanish 1730 GMT 15 Jul 82]

TELCOR OBTAINS LOAN FROM BULGARIA--Capt Enrique Schmidt, director general of the Nicaraguan Telecommunications and Postal Services Institute, TELCOR, has described his recent visit to Spain and Bulgaria as positive and beneficial for the development of the country's economy. He headed a high-level government delegation that visited those European countries. The official made the announcement today during a press conference in the sessions room of the TELCOR building in Villa Fontana. He said that the achievements of the tour include obtaining a loan from the Bulgarian electronics minister for up to $10 million. He said that this loan will be used for the purchase of 75 electronic centrals for municipalities in the country. He added that this project will begin in about 2 months. He also announced that in Spain he signed the charter of the Hispanic-American Association of Telecommunications research and study center in which the Latin American countries and Spain participate. [Text] [PA152355 Managua Radio Mundial in Spanish 1730 GMT 15 Jul 82]

ADVANCES IN NATIONAL BROADCASTING--Edwin Zablah, who heads the Peoples Radio Broadcasting Corporation, CORADEP, held a news conference to explain the achievements made during the first year of this organization which manages stations confiscated from Somozists. The 15 stations which are part of CORADEP are in Chinandega, Matagalpa, Managua, Rivas, Jinotega, Ocotal, Chontales, Leon, Esteli and Bluefields and include the ones established by our revolution in Rio San Juan and Rosita in northern Zelaya. CORADEP also gives technical assistance and maintenance. It has set up a shop for this purpose with highly qualified technicians who also made spare parts for the transmitters. CORADEP has also implemented new methods in national broadcasting. Certain stations are targeted at specific audiences, such as radio Exito, which is aimed at youth, La Future, with popular variety programs, and La Continental, which broadcasts selected music. Zablah added that future plans include the training of announcers and directors, which it is believed will allow a great advance in quality which a new generation will share in national broadcasting. [Text] [PA172317 Managua Radio Sandino in Spanish 1830 GMT 17 Jul 82]

CSO: 5500/2236

PANAMA

BRIEFS

PROPOSED MEDIA BOARD WILL HAMPER PRESS--The Media Advisory Board [junta asesora de medios de comunicacion social] will probably be the most peculiar of the strange monsters created with "revolutionary" imagination, since it is the first case we know of in whcih the old principle that the function creates the organization is reversed. The board has in fact been formed without any legal instrument to regulate it, and its members have been appointed in the same way. No one seems to know what this unique organization is all about, and its members have had to name a commission to determine the objectives and functions of this strange entelechy. This matter would be of little importance were it not for the grave risks involved in the functioning of an organization created to impose information policies on the media, disguising its censorship role under false moralizing intentions. The present members of the board have said that they have no intention of assuming the role of censors; however, the way the board was created, together with the fact that its functions have not been defined, gives us good reason to believe that freedom of the press--already badly hampered by the arbitrary measures "suggested" by the National Guard commander--is in danger. Under these circumstances, a media advisory board without defined functions and objectives could be used for anything and could end up being an obedient generator of new and more dangerous "suggestions." [Text] [PA161924 Panama City LA PRENSA in Spanish 16 Aug 82 p 1A]

CSO: 5500/2236

TELCO DESCRIBES DEVELOPMENT OBJECTIVES FOR 1980'S

Port-of-Spain SUNDAY GUARDIAN in English 1 Aug 82 Telephone Company Supplement p 13

[Text] The Trinidad and Tobago Telephone Company, under its new, revitalised Management team, is about to embark on a massive development programme, which will give the country the most modern telephone system in the developing world by the end of the decade of the eighties.

Earlier this year, the Board of Directors set out a number of objectives for its development effort over the 1982 - 1987 period.

OBJECTIVES:

1. To provide telephone service to meet 90% of the demand in the urban areas, upon request. This would ensure a 30% penetration factor. In other words a telephone density of 30 phones per 100 population, which would mean a total of 450,000 telephones in the country and a total of 300,000 lines.
2. To pattern the Company's methods and procedures along North American standards and to standardise on equipment and suppliers operating in North America.

   This was because:-
   - (a) Trinidad and Tobago falls within the 809 North American exchange area.
   - (b) This would eleminate a number of interfacing and other problems faced with a mixture of other types of equipment and suppliers.
   - (c) The North American telephone system is undoubtedly among the most efficient in the world.
3. To deal only with suppliers with proven track records.
4. To ensure that all new switches would use digital technology since this is the latest state of art.
5. To retire much of its step by step equipment currently in use because of the difficulty in obtaining spare parts for that type of equipment and the increased maintenance effort required as the equipment gets older.
6. To embark on a vigo-

rous training programme of the Company's employees to ensure that they would be able to adequately manage and maintain the enlarged system, with the new technology.

Once these objectives were laid down, the Company decided that the INITIAL thrust of the Development Programme would be in District 1, which encompasses the North-West peninsula of Trinidad, or the areas currently served by the Nelson, West, Belmont, Maraval, Diego Martin and Chaguaramas Exchanges.

The Board made it clear however, that although the initial thrust would be in District 1, the intention is to extend activities to Districts 2 and 3, which make up the rest of the country, even prior to the completion of the proposed District 1 operations.

The main reason for the decision was the fact that District 1 was the most sensitive because of the problems caused by the fire at the Nelson Exchange, and because that was the area of highest-density demand.

The Company's Plannners, after conducting a series of in-depth surveys, and collating information acquired from a number of sources, including the Central Statistical Office and the Town and Country Planning Department, forecast that District 1 showed a requirement of 92,000 lines by the end of 1987. This was expected to rise to 125,000 by 1993. There are currently 22,000 lines in the area in question.

A comprehensive review was then made of all the major Central Office equipment manufacturers to select the Company best suited for our needs.

After the evaluation, it was agreed that Northern Telecom of Canada was most suitable for our needs.

Northern Telecom is among the largest manufacturers of telecommunications equipment in the world. It develops, designs and manufactures the major elements required for the modern telecommunications network, plus a range of date processing and advanced office systems.

Since 1976, it has been the leader in the manufacture of digital switching systems. In that same year, Northern Telecom became the first manufacturer in the world to announce a complete hierarchy of digital switching systems:-

DMS 10 - a digital community dial office or small local switch.
DMS 100 - a local switch.
DMS 200 - a toll switch.
DMS 300 - an international gateway switch.

Northern Telecom has successfully installed its switches in countries all over the world, including the Caribbean (Bermuda, the Bahamas, Barbados).

Negotiations were then started with Northern Telecom, which resulted in the signing of an agreement on Monday, July 19.

The Agreement guarantees that:-

(a) Subscribers in Trinidad and Tobago must begin to see results in the shortest possible time.
(b) The equipment to be installed must be provided at reasonable cost, and must be of the type that the entire development programme becomes self-financing in the shortest possible time.
(c) There must be heavy emphasis on training of Telco personnel to ensure a meaningful transfer of technology.
(d) Telco personnel must be involved in all stages of the planning and implementation of the development programme.
(e) That the Telephone Company will purchase Central Office and Transmission equipment from Northern Telecom at fixed prices for the duration of the contract.

In addition, substantial portions of the Contract costs are tied to the successful operation of the Central Office equipment.

At Monday's signing ceremony at the Trinidad Hilton, the Telephone Company's Chairman, Mr. Fenrick De Four, noted that he was extremely happy to have reached agreement with a Company, which is undoubtedly one of the world's leaders in the field of telephone technology.

He said he hopes this is just the beginning of a relationship that would be mutually beneficial to the Trinidad and Tobago Telephone Company and Northern Telecom.

In reply, Northern Telecom's President, Mr. B.A. Beneteau, assured Mr. De Four that his Company will do all within its power to satisfy the need of the people of Trinidad and Tobago.

He stressed that proof of this will come as early as December 1983 by which time District 1 will enjoy a telephone service second to none in the developing world.

Mr. Beneteau also noted that his Company was very pleased to have entered into yet another contract with a Caribbean country.

Northern Telecom has already successfully installed their DMS digital switches in the Bahamas, Bermuda and Barbados.

IMPLEMENTATION

a. Nelson Exchange - Installation of new Operator positions. 1st Quarter 1983.

- Installation of new tandem switch to permit subscriber growth. 3rd Quarter 1983.

- Installation of a new Central Office for Port of Spain with a capacity of 32,000 lines. 3rd Quarter 1983.

b. West Exchange - Installation of a 5,000 line Central Office to serve Woodbrook, St. James and St. Clair, and to replace old equipment. 3rd Quarter 1983.

- Extension of that Switch of provide an additional 12,600 lines. 1st Quarter 1984.

c. Diego Martin Installation of a new Switch to replace the existing step by step exchange.

- Extension of that Switch to provide an additional 9,300 lines. 1st Quarter 1984.

Apart from new costly digital switching equipment, the entire Development Programme will necessitate major cable plant activities in every major switching centre in Trinidad and Tobago.

There will be major duct and manhole work required to allow for the large feeder cables to be placed out of sight.

All existing cable facilities areas currently served by the West and Belmont Exchanges are to be replaced. This will guarantee an improvement in the quality of service to subscribers who have been working on deteriorating equipment for some time.

The majority of cable facilities in Port of Spain, and, to a lesser extent, Diego Martin, will also be reinforced.

These works will ensure that service will be readily available when and where requested.

The provision of additional service will also require house wiring and provision of telephone instruments in all currently - unserved residences and business establishments. And, the cost of support services (vehicles, tools, etc.,) will be enormous.

The Management and staff of the Telephone Company are committed to the success of the Development Programme, which will ensure an expanded and improved telephone service for the people of Trinidad and Tobago.

CSO: 5500/7560

BRIEFS

NEW RADIO STATIONS--According to official reports, two new radio stations will soon begin operating in Monagas State. One of the stations will be located in Maturin and will probably be called (Ondas del Guarapiche). The other station will be located in Temblador, where exploitation of the Orinoco oil belt will begin soon. [Caracas Radio Continente Network in Spanish 2100 GMT 25 Aug 82]

CSO: 5500/2236

BRIEFS

FORUM DISCUSSES MEDIA ROLE IN LEBANON--Kuwait, 13 Jul (KUNA)--Arab news agencies are ineffective because they are directed to serve regimes and 99 percent of foreign agencies are biased, KUNA Director-General Barjas Mahmud al-Barjas said. Addressing a panel sponsored by the Popular Committee for Solidarity With the Palestinian and Lebanese Joint Forces, Al-Barjas said contrary to Israelis, Arab individuals are lacking personal freedom. The Arab world is endangered by a new colonialism as a result of the current war between the Palestinian and Lebanese joint forces and Israel, Dr Muhammad al-Rumayhi, chief editor of AL-'ARABI said. The forum, at Kuwait Graduates Centre, was called to discuss the role of information in the face of the Israeli invasion of Lebanon. Official Arab information failed to serve the cause of liberation and continued to propagate policies of regimes, Sulayman Fulayhan of AL-WATAN pointed out. With the exception of Lebanon and Kuwait, the Arab world is completely lacking independent newspapers, he said. While 250 foreign correspondents are now in Beirut to cover developments, not a single Arab journalist is reporting from the Lebanese capital, he added. [Text] [GF151258 Kuwait ARAB TIMES in English 14 Jul 82 p 7]

CSO: 5500/2236

BRIEFS

NEW TELEVISION TRANSMITTERS--According to the Central News Unit, with the help of the network expansion and engineering unit and the staff of the Voice and Vision of the Islamic Republic of Iran two new television transmitters have started operation in Baluchestan region. One of the transmitters is located in Khash, covering Kahnuj, Dehpa'in, Eslamabad and (Nikabad). Another transmitter has also been earmarked to cover Qasr-e Qand, Chahbahar region, the installation and operational aspects of which are nearing completion. [Text] [Tehran Domestic Service in Persian 2030 GMT 22 Aug 82]

TV RELAY STATION REPLACED--According to the central news unit, the operations for replacing the (?Golshakrak) relay station and the Bafq relay serio have been completed thanks to the efforts of the expansion unit of the network of the Voice and Vision of the Islamic Republic of Iran, in order to overcome the existing shortcomings in the TV reception in the Bafq and (?Mehriz) areas and also to prepare the grounds for the installation of the [names indistinct] TV relay stations. With the completion of these operations, the inhabitants of (?Mehriz) and [name indistinct] will be able to receive the programs of the Vision of the Islamic Republic of Iran on channel 11 and those of Bafq on channel 5 without difficulty. [Text] [LD020648 Tehran Domestic Service in Persian 0730 GMT 1 Sep 82]

CSO: 5500/2341

BRIEFS

NEW RADIO, TV COMPLEX--Tariq 'Aziz, Revolution Command Council member and deputy prime minister, today inaugurated the first stage of the new radio and television complex that began transmission today. The inauguration ceremony was attended by Latif Nusayyif Jasim, minister of culture and information; the director general of the radio and television corporation; the ATH-THAWARAH newspaper editor in chief; a number of Information and Culture Ministry officials and the representatives of the company which is implementing the project. Jasim praised the efforts that were exerted to complete the first stage of the project on schedule. He said the project will develop media services in Iraq. [Text] [Baghdad Voice of the Masses in Arabic 1700 GMT 1 Aug 82]

CSO: 5500/2236

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN

BRIEFS

NEW TV, RADIO TRANSMITTER--A station for television and local radio retransmission was inaugurated in the directorate of (Shaht) yesterday. [Aden Domestic Service in Arabic 1630 GMT 25 Aug 82]

CSO: 5500/2236

BRIEFS

TELECOMMUNICATIONS PROJECT--International companies from Japan, the Netherlands, France and the FRG have agreed to contribute to a 9-year project to improve telecommunications in the Sudan. The cost of the program will be $850 million. SUNA reports that the government is currently contacting friendly states to seek financing for the project. [Text] [EA260056 Omdurman Domestic Service in Arabic 1700 GMT 25 Jul 82]

CSO: 5500/2341

RADIO STATIONS TO BE SET UP IN EMIRATES

GF101241 Dubayy KHALEEJ TIMES in English 10 Jul 82 p 3

[Excerpt] The Ministry of Information and Culture is implementing projects to set up radio stations in Ash-Shariqah and Fujairah and a television center at Ras Al Khaimah.

The projects are part of the ministry's development programme being executed at a cost of DH 322 million, of the total, projects costing DH 262 million, are being implemented by the Ministry of Information directly and projects worth DH 60 million have been assigned to the Ministry of Works.

The Ministry of Information has allocated DH 50 million for its development schemes during the current year.

The proposed broadcasting stations at Ash-Shariqah and Fujairah will cost DH 13 million while the new television center at Ras Al Khaimah will be set up at a cost of DH 26 million.

A medium-wave transmitting station at Sa'Diyat will also be set up at a cost of DH 14.5 million.

Another project for modernising the development laboratory in Abu Dhabi which will cost DH 4 million.

Other development projects of the ministry included extension of Abu Dhabi TV building costing DH 25 million and a transmission centre of the news agency at Al Maqta' costing DH 7 million.

According to the report issued by the Department of Annual Programmes and Follow-up at the Ministry of Planning, among the projects executed by the Ministry of Information directly are developed of radio transmission rooms and studios costing DH 10 million, film production unit costing DH 20 million, furnishing of Ash-Shariqah cultural centre laboratory costing DH 12 million, Abu Dhabi TV channel II scheme costing DH 14 million, building of video tapes control department costing DH 5 million, development of outdoor transmission vehicle, costing DH 2 million, and installation of phone sets for the outdoor transmission vehicles costing DH 2.5 million dirhams.

Besides these projects, the Ministry of Public Works and Housing is executing a number of projects for the Ministry of Information at a cost of DH 60 million.

These included construction of buildings for six cultural centres at Dubai, Ras Al Khaimah, Bid'zayed, Umm Al Qaiwain and Fujairah, costing DH 40 million and building project for the local news agency costing DH 3.3 million.

CSO: 5500/2341

BRIEFS

NEW FM TRANSMITTER--THE DEPUTY Director of Information & Broadcasting, Mr Dave Harris has announced the commissioning of a new Radio Botswana five kilowatt FM transmitter serving Gaborone and the surrounding area. The transmitter, which has cost around P100 000 to install, will provide VHF/FM service over a radius of about 60 km from the Sebele transmiting station. This includes Mochudi, Molepolole, Ramotswa, Thamaga and of course Gaborone, together with large parts of the Kgatleng District, South-East Kweneng, and parts of Southern and South-Eastern districts. A signal should also be receivable in parts of Kanye, and with a good external serial - up to 100km or even more from the transmitter, he told a BOPA reporter. Engineering tests on the new transmitter were completed this week, although the service will still be liable to interruption occasionally as work progresses on the short-wave improvements at Sebele. The new transmitter broadcasts on 90.7 Megahertz, like the old Gaborone FM transmitter and joins the recently commissioned Selebi-Phikwe facility in bringing FM to an estimated 30% of the population. A relay transmitter is planned for Lobatse before the end of this year, and this will be followed by a number of other VHF/FM stations to cover the major towns and villages over the next few years. The engineering staff of Radio Botswana would be pleased to receive reports of reception of the new FM services, particularly from listeners who live some distance from the transmitters at Sebele and Selebi-Phikwe. [Text] [Gaborone DAILY NEWS in English 2 Aug 82 p 1]

CSO: 5500/5896

BRIEFS

TIME DIVISION AUTOMATIX TELEX--ASSAB--An automatic telex system installed by the Ethiopian Telecommunications Service Authority has become operational here. The Authority, as part of its programme of expanding and modernizing its services, had earlier installed a mechanical apparatus called "time division" in Asmara, Dire Dawa and Massawa. The mechanism makes automatic telex exchange possible both in the country and internationally. The Authority said the newly installed system in Assab, the hub of commercial activity, will make instant communication possible for subscribers at the port. [Text] [Addis Ababa THE ETHIOPIAN HERALD in English 19 Aug 82 p 6]

CSO: 5500/5905

BRIEFS

LONDON TELEPHONE LINK INTERRUPTED--The Posts and Telecommunications Corporation announces that Ghana's telephone link with London has been interrupted. A statement by the corporation in Accra yesterday says the interruption is due to circuit changes being made in London by the British Telecommunication International. The statement explained that the public will be notified as soon as the situation is rectified. [Text] [AB270941 Accra Domestic Service in English 0600 GMT 27 Aug 82 AB]

CSO: 5500/5908

BRIEFS

NEW RADIO STATION--A 10 kw transmitter radio station is to be constructed in Grand Bassa County shortly. It will cost $150,000. The community radio station is expected to broadcast in both English and local languages and will cover a radius of 60 miles. [Excerpt] [AB272100 Monrovia Domestic Service in English 1900 GMT 27 Aug 82]

CSO: 5500/2341

BRIEFS

PROVINCES REJOIN TELEX SYSTEM--Mozambique's northern provinces of Tete and Zambezia have been (?restored) to the country's telex system. An official of the state communications firm said that extending the telex system to the northern provinces became possible when a new telex center was opened in Maputo earlier this year. Tete Province has been without telex communication since 1976 when facilities at Chicualacuala and Gaza Province were destroyed by the Rhodesian Air Force. Zambezia Province has never had telex communications. [Text] [MB261009 Maputo International Service in English 0400 GMT 26 Aug 82]

CSO: 5500/5901

BRIEFS

RADIO STATIONS CALLED ILLEGAL--COMMISSIONERS from the 12 "progressive" states have declared the establishment of FRCN stations in each state of the federation as illegal. They urged the National Assembly to take immediate measures to stop the establishment of such radio stations since it was not in line with the law establishing radio stations. In a communique issued at the end of their seventh regular meeting in Maiduguri, the information commissioners accused the federal-controlled information organs of allowing themselves to be manipulated and monopolised by the National Party of Nigeria (NPN). The commissioners reiterated their call on the Federal Government to give additional television channels to states for effective coverage of their areas. They further urged the Federal Government to exclude broadcast equipment from import restrictions. It was also their view that the Minister of Information should take appropriate steps to reactivate the National Council on Information interest of the nation. [Text] [Kaduna NEW NIGERIAN in English 7 Aug 82 p 1]

CSO: 5500/5893

BRIEFS

TELSAF TAKEOVER--TELKOR, the South African signalling and electronic engineering company, is looking to increasing group turnover in 1982/83 to R60-million. Latest development in the company's progress as a major force in the electronics industry is its acquisition of the majority shareholding in Telsaf (Telettra South Africa), which specialises in microwave and multiplex equipment. The minority holding is retained by the international division of Telettra, Italy, a member of the giant Fiat group and that country's largest privately-owned supplier of telecommunications and transmission equipment (current turnover R200-million, employment roll 5 000). The South African company has the rights, under an exclusive agreement, for the manufacture and distribution of the entire Telettra product range. Telsaf, which was established in South Africa in 1973, is particularly strong in the field of digital transmission, with Excom and SA Transport Services (SATS) as major customers--the company installed the first digital microwave network in South Africa for SATS. Telsaf will continue to operate independently and autonomously from its existing premises at Wynberg, Sandton, and will now become a South African-owned company with the considerable manufacturing, technical and systems capabilities of Telkor at its disposal. Managing director Mr Silveria Boccetti says: "We do not expect an immediate increase in turnover and profits as a result of the merger, since it has come at a difficult time during an economic downturn. However, we certainly look foward to positive benefits emerging in 1984." [Text] [Johannesburg THE CITIZEN in English 17 Aug 82 p 25]

CHRISTIAN RADIO--The mayor of Johannesburg yesterday plugged into--and gave an official plug to--Radio Pulpit which broadcasts Christian programmes from Bophuthatswana. Mr Danie van Zyl, the mayor, hosted a luncheon at the Civic Centre for Afrikaans-speaking businessmen. Officially known as Trans World Radio (RSA) Radio Pulpit, the station transmits from 7 am to 10.30 am on Sundays and from 7 am to 8.55 am on other days to most parts of South Africa. Mr Van Zyl said he had been approached for financial help but since the City Council's coffers were so depleted, he felt businessmen could be sympathetic. He said he would arrange a similar luncheon for English speaking businessmen in Johannesburg. Among those present yesterday was Dr Carel de Wet, a former Cabinet Minister and former South African Ambassador in London. The managing director of Radio Pulpit, Dr Willie Marais, said the cost of building the medium-wave facility was R400 000. Most of the funds had been provided by listeners and well-wishers but a shortfall of about R140 000 remained. Medium-wave broadcasts started last month. Until then, religious programmes had been beamed on short-wave in 26 languages from Manzini in Swaziland. "Our programmes are non-political and uncontroversial, we have no commercials, and 18 churches subscribe to our Christian message of spreading the truth," Dr Marais said. [Text] [Johannesburg RAND DAILY MAIL in English 6 Aug 82 p 3]

CSO: 5500/5903

GOVERNMENT URGED TO HALT INSTALLATION OF PIRATE SATELLITE RECEIVERS

Mbabane THE TIMES OF SWAZILAND in English 19 Aug 82 pp 1, 20

[Article by James Dlamini]

[Text] THE Government was yesterday urged to introduce tight controls against people who install pirate satellite receivers.

Mr. S.M. Dlamini said fines for such offenders were too lenient. According to the relevant legislation, maximum fines are E500 or six months' imprisonment, or both.

Mr. Dlamini said the government should pass tough legislation with stiff sentences for people who install pirate receivers in their premises.

"My worry stems from the fact that crime is becoming more sophisticated and there should be deterrent penalties to discourage people from trying," Mr. Dlamini said. "People may install their own satellite receivers and then receive TV broadcasts from other countries; some such broadcasts may be those which are not desirable in Swaziland. In that case, you will still have people tuning into them without bothering to consult the relevant authorities," he said.

The Deputy Minister in the Deputy Prime Minister's Office, Prince Bhekimpi, said satellite were still under the Department of Telecommunications. He said, however, that measures would soon be devised to deal with such a situation.

Prince Bhekimpi said if a need arises, the law can always be amended.

Swaziland has a satellite loan agreement with the Canadian government. The agreement is for the erection of a satellite receiver in Swaziland which would receive TV broadcasts from any part of the world.

Satellite receivers can be installed in private homes at enormous expense, according to our own source, possibly for more than E10,000.

Equipment

That may randomly pick up sounds without pictures or vice versa and the pictures may be blurred unless more money is used to obtain filters.

In order to get it to work reliably one would have to spend even much more money to erect equipment. It can be very bulky and difficult to hide, according to the source.

CSO: 5500/5907

LIGHT-WAVE LINK TO BOOST ZBC QUALITY

Harare THE HERALD in English 19 Aug 82 p 7

[Text]

A $30 000 fibre optic system has been commissioned by the Zimbabwe Broadcasting Corporation for their Pockets Hill complex in Harare.

The corporation will become the first organisation in this country to use the system.

Mr David Woodward, director of engineering at the ZBC, said the system might start work next month.

"The system is very important because it is totally immune to electrical disturbances. One cable can carry a lot of information," he said.

The optical system was supplied by Electro Technologies, a joint venture of Siemens AG of West Germany and the Industrial Development Corporation of Zimbabwe.

In a statement, the senior manager of the corporation, Mr Lindsay Goldie, said: "The system handles all video signals between the studios, control room and transmitters in the form of an optical wave guide.

"This will electrically separate the transmitter and towers from the studios and control room."

In summer the control room and studios would not be in danger of being affected if lightning struck the towers.

The system was also easy to handle, Mr Goldie said.

The optical transmitter and receiver were connected by an optical fibre approximately one millimetre thick. Flexible and unaffected by electromagnetic fields, the low-weight fibre is an insulator which could also be used to connect points of different electric potentials.

OPTICAL

Among the company's optical waveguide links already supplied to the German Federal Post Office and to private customers is a 22-km section with six fibres allowing the simultaneous transmission of 1 440 telephone conversations in both directions.

Mr Goldie said the company's current research programmes involved the simultaneous transmission of almost 8 000 conversations over a single pair of optical wave guides.

CSO: 5500/5904

BRIEFS

BROADCASTING DIRECTOR--The ZBC [Zimbabwe Broadcasting Corporation] Board of Governors has appointed Comrade Tirivafi John Kangai as director general of the Zimbabwe Broadcasting Corporation with effect from 1 July 1982. [Excerpt] [Harare Domestic Service in English 0500 GMT 28 Jun 82]

ZTV COLOR--A LARGE consignment of colour television equipment, worth $3,5 million has arrived here from France. The equipment will be installed at the ZTV centres in Harare and Bulawayo with assistance from French engineers, viewers were told on yesterday evening's main ZTV news. The installation of the equipment is expected to be completed by January, the statement said. The consignment included colour studio equipment, telecines, mixers, video recorders, cameras and transmitters. The new transmitters should give a better quality picture. The Boeing 747 which brought the equipment also carried 30 tonnes of steam pipes for the thermal power station at Hwange and six tonnes of electrical equipment for the National Railways. [Text] [Harare THE HERALD in English 24 Aug 82 p 7]

CSO: 5500/5907

MOSCOW VIEWS CIA ROLE IN EXTERNAL BROADCASTING

LD192000 Moscow Radio Peace and Progress in English to Asia 1300 GMT 19 Aug 82

[Text] The Reagan administration has allocated another $40 million for expanding the broadcasting time of the Voice of America to foreign countries. The power of the transmitting stations in Liberia, Sri Lanka and the Philippines has been greatly increased. Consequently the United States is accelerating its ideological attacks on the peoples of the Asian, African and Latin American countries. These continents are conducting a liberation struggle against imperialism and neocolonialism and that is precisely why the United States is reorganizing its undermining propaganda means, expanding the personnel and increasing allocations for their activities. These additional allocations to the VOA, as its director recently admitted, will be utilized also for keeping closer coordination in the broadcasts made by the CIA-financed radio stations, the Voice of Free Asia and the Voice of Free Africa. Each of these stations has a set job to do, a job -- needless to say -- that has been given them by the CIA. The broadcasts of the Voice of Free Asia, for instance, contain slanderous interpretations of events occurring in Afghanistan, in Vietnam, Laos and Kampuchea. The radio station tries very hard to distort the essence of the progressive socioeconomic transformations going on in a number of Asian countries to compromise the leaders of the national liberation movement.

The VOA and the Voice of Free Asia conducting broadcast to the Arab countries round the clock try to slander and attack those public forces in the Near and Middle East countries that come out against Washington's imperialist policy. These so-called voices stop at nothing, at no underhand means and slanders to try whitewashing the Isreali aggression and Nazi-type atrocities in Lebanon. The undermining United States propaganda also spreads the fairy tale of a non-existing Soviet threat to the Muslim nations and under cover of these outright lies, Washington is carrying out plans to create more military bases in the Indian Ocean and the Persian Gulf region. The Americans are striving to foment clashes between Iran and Afghanistan, between Iran and Iraq, playing up certain religious differences between them and ascribing various hostile schemes in their mutual relations.

In broadcasts to Pakistan, anti-Afghan and anti-Indian sentiments are constantly underscored so that the Islamabad regime could be tied still closer to Washington's policy in Asia. In the psychological war of American imperialism against the developing countries, the CIA occupies the leading role. Not so long ago Washington sanctioned what was called regular ties between the CIA and representatives of the mass media. The materials prepared by members of the CIA concerning the internal affairs of various countries are published in what is passed off as neutral publishing houses in third countries. Actually, however, they are totally controlled by the American Central Intelligence Agency. Operatives of the CIA are working in all African departments of the International Communications Agency, or the ICA, and also as correspondents of the ASSOCIATED PRESS and the UNITED PRESS INTERNATIONAL. Spreading slander and misinformation, they are striving to incite differences amongst the African people, to instill ideas in their minds that are favorable to Washington.

The understanding is growing in the world that the ideological struggle must not turn into a psychological war, that it must not be used as a means for interfering in the internal affairs of countries and peoples or lead to political and military confrontation.

CSO: 5500/2236

BRIEFS

KIRGIZ TELEVISION RELAY--Frunze--A television relay has gone into operation in the (Baum) District of Kirgiziya. Thanks to the network of television stations, people in all the cities and 98 percent of the rural population of the republic can watch television. [Moscow Domestic Service in Russian 2300 GMT 21 Jul 82]

TV COMMUNICATIONS STATION--A satellite television communications station has begun operation in (Dursan), a town in the Kyzylkum Desert in Uzbekistan. The Moscow television broadcasts will now reach the Virgin Land workers in this area. Similar stations for television reception via satellite are presently being set up in a number of other remote regions in the republic. [Moscow Domestic Service in Russian 1530 GMT 14 Aug 82]

DIRECT-DIAL LINKS TO WEST CUT--Moscow, 15 Jul (AFP)--The Soviet Union today suspended direct-dial telephone links with the outside world. Countries affected by the suspension, decided on last 1 July but never officially announced, include Britain, France, West Germany and Switzerland. Soviet authorities blame technical difficulties, but Western diplomats here see the move as intended to tighten supervision of telephone links with the West. They say that the multiplication of telephone circuits in the Soviet Union, particularly the introduction of direct dialing during the 1980 Moscow Olympics, made wiretapping a lot more complicated for the security police. [Text] [NC152007 Paris AFP in English 2001 GMT 15 Jul 82]

UZBEK SATELLITE TELEVISION--A satellite television communication station has been commissioned in Gulistan. Inhabitants of Syrdarya and Dzhizak oblasts can now receive on their televisions images transmitted through space from the capital. At the same time as receiving Orbita-4 programs, the possibility has arisen of relaying experimental broadcasts of the second all-union and second republican programs. As the Uzbek Ministry of Communications reported, similar stations for receiving television broadcasts from space are now being installed in a number of other regions of the republic. The town of Zarafshan will be provided with a television "space bridge," after that Nukus will receive one. [Tashkent Domestic Service in Russian 1200 GMT 9 Aug 82]

SATELLITE TV RECEIVING STATION OPENS--Another receiving station for the Moskva satellite television system began working today in an oilworkers' settlement in Mangyshlakskaya Oblast. Virtually all the oblast inhabitants can now receive television broadcasts from the capital. The USSR Ministry of Communications reports that 86 percent of the country's population can now receive central television first programs in color. Over 2,500 (?TV stations) and repeater stations are now operating. The Orbita system has 90 ground stations. [Summary] [LD171640 Moscow Domestic Service in Russian 1630 GMT 17 Aug 82]

SATELLITE COMMUNICATION WITH SHIPS--The first transmissions on information to ships of the merchant fleet have been successfully carried out in Vladivostok using the INMARSAT organization's system of international communication satellites positioned over the Pacific, Indian and Atlantic Oceans. The All-Union Association Morsvyazsputnik has been formed at the Ministry of the Maritime Fleet. It is responsible for building shore stations and for satellite communication equipment on the country's passenger, trading, fishing and scientific research ships. The first two stations are already being built. The first is near Odessa and the other near Nakhodka in the Maritime Kray. Most ships will be fitted with marine communication satellite equipment during the current 5-year plan. [Text] [LD200034 Moscow Domestic Service in Russian 2100 GMT 18 Jul 82]

ARCHANGEL COLOR PROGRAMMING--Archangel television studios have changed to color programming. Reconstruction has been carried out there. Most viewers will be able to receive two color channels. New minirelays are being built in outlying villages. They receive signals from earth satellites through the Moskva space communications system. [Text] [LD170548 Moscow Domestic Service in Russian 1030 GMT 16 Jul 82]

CSO: 5500/2341

BRIEFS

FRG-FRENCH TV SATELLITES--Bonn, 13 Jul (DPA)--The construction of the long-planned German-French television satellites has been agreed. Andreas von Buelow, German minister for research, told the press on Monday evening (12 July) that he and his French counterpart, Jean-Pierre Chevenement, had approved the relevant contract with the German-French "Eurosatellite" industrial consortium. It is to be signed this month. The joint project provides for the construction, launching and testing, over a period of 2 years, of one German (SAT) and one French (TDF-1) satellite, which are to operate three television-radio channels each. They are to be launched in 1985. The cost will be borne by the German Research Ministry and the German Post Office. The latter will contribute DM70 million in 1984 and in 1985. The minister was optimistic about possible export chances for the satellites. The first success was that an order is to be placed with "Eurosatellite" for the Scandinavian telex radio satellite trial in which Sweden, Norway and Finland cooperate. The satellite project agreed by Bonn and Paris in 1980 is part of the new space program to be adopted by the German Federal Cabinet on Wednesday (14 July). It provides for the allocation of about DM3.5 billion from federal funds until 1985 to promote space research. [Text] [LD132348 Hamburg DPA in German 0744 GMT 13 Jul 82]

CSO: 5500/2236

FEDERAL REPUBLIC OF GERMANY

FRG CUTS FUNDS FOR INFORMATION PROGRAMS IN U.S.

DW281203 Frankfurt FRANKFURTER ALLGEMEINE in German 28 Jul 82 p 4

[Dispatch signed K.B.: "Funds for Information in America Declined"]

[Summary] Bonny, 27 Jul--Minister of State in the Foreign Office Hamm-Bruecher has obviously failed to obtain the additional funds she required for her task as the coordinator of German-American relations. Early this year Mrs Hamm-Bruecher had asked for about DM4.5 million out of the 1982 budget to provide information about the FRG in the south, midwest and west of the United States. When the finance minister at the time rejected this demand, the foreign office rearranged its own budget to fund activities in the United States. As for Mrs Hamm-Bruecher's request for the 1982 budget, there are indications that the amount requested for her coordinating activities, presumably nearly DM20 million, has been disapproved by the cabinet on the grounds of the precarious budget situation.

"In the same context the planned informational with a Deutsche Welle Television program in the United States has been postponed. It had been planned to start broadcasting 3 hours of programming a week regionally via U.S. cable networks in 1983. Initial aid from the Federal Government was to have been DM4 million."

CSO: 5500/2341

BRIEFS

USSR REDUCES TELEPHONE LINKS--The Soviet Union has announced that it will reduce the total number of telephone links with Finland from the beginning of July. The number of outgoing lines from Finland to the Soviet Union will decrease from 24 to 21 and the number of incoming lines from 24 to 16. The Soviet Ministry of Communications says the reductions are for technical reasons, it is said by the Foreign Affairs Office of the General Directorate of Posts and Telecommunications. The restrictions on telephone traffic announced by the Soviet Union apply to several Western countries, including Austria, the Federal Republic of Germany, France, Britain and the United States. In the correspondence between the Finnish and Soviet telecommunications administrations, Finland has said it does not desire such reductions. On the contrary, Finland would need to increase the number of telephone lines to at least 31, according to the General Directorate of Posts and Telecommunications. [Text] [LD291304 Helsinki Domestic Service in Finnish 0930 GMT 29 Jun 82]

CSO: 5500/2236

BRIEFS

'AFP' PHOTOGRAPH TRANSMISSIONS--Paris, 9 Jul (AFP)--Agence France-Presse has launched a world first by using a new numerical system in transmitting news photographs from the footfall World Cup in Spain. The new process consists of a coder-decoder called "SYTIN" which decomposes photographs into a series of dots--each given a binary number--which are analysed line by line during transmission. At the point of reception the binary numbers are "translated" into dots of various shades of gray, thus reconstructing the photograph. The process can also be used for transmission of color pictures, with the luminosity of the three basic colors changed into black and white as the photograph is received. [Text] [NC092134 Paris AFP in English 1308 GMT 9 Jul 82]

CSO: 5500/2341

BRIEFS

ZAKINTHOS RADIO BEGINS OPERATIONS--The Zakinthos Radio Station began operations yesterday. The station will broadcast programs every Monday, Wednesday and Friday from 0830 to 2100 [0530 to 1800 GMT]. [Text] [NC242004 Athens Domestic Service in Greek 0400 GMT 24 Aug 82]

COMMUNICATIONS WITH TURKEY--Automatic telephone. This was announced by the Greek Telecommunications Organization. [Text] [NC162137 Athens Domestic Service in Greek 2100 GMT 16 Jul 82]

CSO: 5500/2341

BRIEFS

NEW NEWS AGENCY--Fourteen [as heard] public and private news media organizations today signed a charter for a new news agency, "NOTICIAS DE PORTUGAL," which could begin operating in the second half of September. Formalities for a 150,000 contos subsidy from the government have first to be completed. Macedo e Cunha, chairman of the inaugurating committee, said that a veto by President Ramalho Eanes of the government decree closing down the ANOP news agency would pose no problem for the new agency. He said "NOTICIAS DE PORTUGAL" is neither the successor nor the inheritor of ANOP. [Excerpt] [LD252332 Lisbon Domestic Service in Portuguese 2200 GMT 25 Aug 82]

CSO: 5500/2236

BRIEFS

TELEPHONE LINES WITH USSR REDUCED--Moscow--Moscow is cutting by two-thirds telephone lines between Russia and Britain. Plugs are also to be pulled on other links with the West. The reason given is "technical work" which the Russians say will last until 1984 but Western diplomats suspect that the Kremlin's true intention is to reduce the growing number of direct-dial facilities. These have enabled Russian emigres to maintain close contact with relatives and friends. At the same time Western lobbyists, newspaper men and public interest groups have been able to speak directly to Russians in their homes. According to sources British Telecom has been informed of deep cuts in telephone links from July. Lines to Britain will be reduced from 46 to 14 while those to Russia will be cut from 42 to 14 until the end of 1984. The Soviet authorities have promised further explanations of the work they say is necessary. But it is not known when such explanations will be given. Telephone lines with Austria are also being slashed, from 24 to four it is believed. The Austrian case is particularly suggestive of Soviet motives because there are thousands of Russian emigres in Vienna. British officials say there have been no moves so far by London to raise the phone lines issue with the Russians. Other reports indicate that lines are also to be cut with France and West Germany. American diplomats have heard nothing officially about a reduction of lines. [Text] [PM291203 London THE DAILY TELEGRAPH in English 29 Jun 82 p 1]

END

CSO: 5500/2236

JPRS 81789

16 September 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 239

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 81789

16 September 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 239

CONTENTS

WORLDWIDE AFFAIRS

Japan, USSR Agree On Satellite Orbits
(KYODO, 3 Aug 82) 1

Space Expert Urges Arabs To Build, Operate Satellites
(KUNA, 11 Aug 82) 2

Communications Conference Ends, Protocol Signed
(BTA, 12 Aug 82) 4

ASIA

AUSTRALIA

Briefs

Defense Communications Network Tenders 5
Rural Radio, Television Services 5
New ABC General Manager 5

INDIA

Briefs

News Relay Through Satellite 6
Radio Satellite Link 6
TV Coverage 6

INDONESIA

Briefs

Telecommunication Link With Singapore 7
Mobile Television Station Units 7
Monitoring Station For INTELSAT 8
TV Broadcasting Stations 8

NEW ZEALAND

TVNZ Conducting Experimental Teletext Transmissions (Colin Moore; THE NEW ZEALAND HERALD, 28 Jul 82) 9

Government-Backed Computer Firm Loses School Market (THE PRESS, 28 Jul 82) 11

PAKISTAN

Briefs

Low Cost Ground Stations 12

PEOPLE'S REPUBLIC OF CHINA

Space Program Outlined At Vienna Conference (Jean-Paul Dufour; AFP, 7 Aug 82) 13

Wang Enmao Visits Urumqi Satellite Station (JIEFANG RIBAO, 22 Jul 82) 14

Briefs

INTELSAT Transmission Tests Successful 15
Telecommunications Protocol Signed 15
Hong Kong Calls Rerouted 15

TAIWAN

Briefs

ITA Extends Facsimile Service 16

THAILAND

Briefs

International Service Transmitter Boost 17

VIETNAM

Briefs

Afghanistan Agreement Signed 18

EAST EUROPE

BULGARIA

Briefs

New Radio Receivers 19
Soviet Officials See Stoichkov 19

GERMAN DEMOCRATIC REPUBLIC

Briefs
Shortwave Broadcasts Expanded 20

POLAND

Polish Army Daily On 'Subversive' Radio Stations 'Criminal Activity
(PAP, 23 Aug 82) 21

YUGOSLAVIA

Briefs
Satellite Station 22

LATIN AMERICA

BRAZIL

Brazil Will Own Telecommunications Satellites In 1985
(LATIN, 1 Jul 82) 23

NEAR EAST AND NORTH AFRICA

INTER-ARAB AFFAIRS

UAE To Spend DH2.5 Billion On New Investments
(Ahmad Hasan; KHALEEJ TIMES, 15 Aug 82) 24

AFGHANISTAN

Afghan Minister Outlines Role of Radio, Television
(Kabul Domestic Service, 7 Aug 82) 25

IRAN

Plans To Expand National Communications System Discussed
(Morteza Nabavi Interview; KEYHAN, 19 Jul 82) 27

'ETTELA'AT' Announces Work On Radio Centers
(ETTELA'AT, 24 Jul 82) 33

Briefs
Radio-Television Network Expansion 34

UNITED ARAB EMIRATES

Briefs
UAE Joins INTELSAT 35

SUB-SAHARAN AFRICA

MOZAMBIQUE

Briefs
Provinces Rejoin Telex System 36

SOUTH AFRICA

Briefs
Swaziland Earth Satellite Station 37

SWAZILAND

Law On New Broadcasting Authorities Published
(James Dlamini; THE TIMES OF SWAZILAND, 29 Jun 82) 38

ZAIRE

Briefs
French Aid For Transmitter 40

ZAMBIA

Briefs
International Microwave Network 41

USSR

Volgogradskaya Oblast Satellite TV Developments
(IZVESTIYA, 26 Jul 82) 42

Briefs
Television Relay Station Commissioned 43

WEST EUROPE

CYPRUS

Briefs
New Press Office 44

FRANCE

Stations Compete To Use Future Direct Broadcast Satellite
(Daniele Granet; LE NOUVEL ECONOMISTE, 26 Jul 82) 45

Briefs
Direct Broadcast Satellite Conference 47

NETHERLANDS

Cable TV Gets GO-Ahead To Show Soviet Programs
(DE VOLKSKRANT, 6 Jul 82) 48

PORTUGAL

Presidency Issues Note On 'ANOP'
(Lisbon Domestic Service, 14 Aug 82) 49

Prime Minister's Office Replies To Presidency on 'ANOP'
(Lisbon Domestic Service, 15 Aug 82) 51

News National Agency To Replace 'ANOP' Soon
(AFP, 25 Aug 82) 53

JAPAN, USSR AGREE ON SATELLITE ORBITS

OW030441 Tokyo KYODO in English 0403 GMT 3 Aug 82

[Text] Tokyo, 3 Aug (KYODO)--Japan and the Soviet Union have agreed to change the orbital positions of communication satellites which they plan to place into stationary orbit to avoid interference through close proximity.

This was revealed Tuesday by Posts and Telecommunications Minister Noboru Minowa.

Japan was planning to launch its second communication satellite, code-named CS-2A, into a stationary orbit next February at longitude 130 degrees east, the same as the scheduled position of a new Soviet communication satellite.

Since there were fears that the placing of the two satellites in the same orbital position would interfere with their functions, the two countries began discussing countermeasures to it in Moscow 26 July.

Minowa revealed agreement was reached to change the orbital position of the Japanese CS-2A to longitude 132 degrees east and that of the Soviet satellite to longitude 128 degrees east, resulting in a gap of four degrees.

He also said agreement was reached so that the position of the CS-2B, which Japan planned to place into orbit at longitude 135 degrees east next August, will be changed to 136 degrees east, so as not to interfere with another Soviet communication satellite already in orbit at longitude 130 degrees east.

CSO: 5500/2238

SPACE EXPERT URGES ARABS TO BUILD, OPERATE SATELLITES

LD111504 Kuwait KUNA in English 1116 GMT 11 Aug 82

[Text] Vienna, 11 Aug (KUNA)--Arab countries should build, launch and operate their own communications satellites instead of relying on the Western world, a leading space technology expert urged here Wednesday.

"The Arabs are neglecting space, and they cannot afford to do so," said Rashmi Mayur, Indian vice-chairman of the "Non-Government Organizations for Third World Space Development" at the United Nations "UNISPACE 82" conference.

"In terms of their own capabilities the Arab world is far behind some of the Third World countries like India, Brazil and Indonexia," Mayur told KUNA in an exclusive interview here.

Egypt was making a big effort to establish its own space projects, but major oil-producing Arab countries like Kuwait and Saudi Arabia were particularly neglectful, Mayur said.

"They have to invest in institutions to create a space capability using their resources to build their future. It is certainly not a question of the cost as far as the oil-rich Arab states are concerned.

"If they do not do this, they will be totally dependent on Western technology, spending vast sums on renting and buying technology that can be turned off at the whim of Western countries."

A space boycott is as easy to operate as an oil boycott, he added.

"With the Arabs being in the most politically charged environment in the world, one step against them by the space countries will plunge them in complete darkness. It will put them 1,000 years behind, and their oil wealth will not help them then."

The other problem was that the Arabs, like much of the Third World, were not united, so their capabilities were dispersed, said Mayur.

Kuwait, Saudi Arabia, Egypt and Turkey should set up an Arab regional space cooperation mechanism which would eventually build and sent its own satellites into orbit. Other regional groupings should operate in Africa, India and Latin America.

"ARABSAT," he agreed, "was a major step in the right direction, but the Arabs should always remember that ARABSAT is totally brought in from outside, with a very high dependency on America, France and Germany," he concluded.

CSO: 5500/2238

COMMUNICATIONS CONFERENCE ENDS, PROTOCOL SIGNED

AU121917 Sofia BTA in English 1833 GMT 12 Aug 82

["Through Bulgaria--A Mighty Telecommunicative Mainroad"--BTA headline]

[Text] Sofia, 12 Aug (BTA)--This evening a protocol on the results of the meeting between representatives of the administrations of the communications of Bulgaria, Kuwait, Turkey, Iraq and Syria was signed here.

Discussions went on the direct and transit earth telecommunications on the highway Europe Syria-Ankara-Damascus-Baghdad-Kuwait and further through the transcontinental cable across the Indian Ocean towards Pakistan, India, Sri Lanka, Bangladesh, Burma, Malaysia, Indonesia up to Australia. Reviewed was the way in which this extraordinarily large scale telecommunications highway will be implemented. Discussed were the possibilities for the establishment of communication systems ensured by earth radio ralley cable lines in order for new communication links between the countries' participants in the meeting to be set up in the very first stage.

Discussions also went on questions related to the setting up of stable telecommunications on the territory of Bulgaria for transit and direct links towards these states. A television channel for transmitting the programmes of the intervision and Eurovision will also be set up.

The international consultative committee of the telegraphs and the telephones with the UNO has developed a plan for the development of the communication in the world. A part of it is also the regional plan for the Mediterranean Basin and the Middle East. In it the further development of the communications of the countries-participants in the meeting in Sofia are also included. On the basis of the researches of the specialists a project in which a thorough analysis of the chief trends for the development of cable communications in this region has already been made. Thanks to her geographical position Bulgaria will be turned into a natural centre in the sphere of communications.

CSO: 5500/2238

BRIEFS

DEFENSE COMMUNICATIONS NETWORK TENDERS--Six companies from Australia and overseas have been invited to submit tenders for the first phase of a new defense communications network. The project known as (DISCON) was announced by the government last year and is expected to cost about $200 million. The Australian dollar is worth slightly less than the American dollar. The minister for defense support, Mr Viner, says the project will link major military bases and establishments throughout Australia and meet defense communications' needs through the year 2,000. He said the six companies asked to submit tenders for the first phase have been chosen from a large number who showed interests. [Text] [BK080927 Melbourne Overseas Service in English 0830 GMT 8 Aug 82]

RURAL RADIO, TELEVISION SERVICES--There is to be a major expansion of commercial radio and television in rural areas of Australia. Under a new plan announced by the communications minister, Mr Brown, many country and regional centers will be able to have commercial frequency modulation radio and a second commercial television station. This would be done through the issuing of a supplementary license to the existing licenses. Mr Brown said the decision to allow the broadcasting tribunal to operate a supplementary license scheme would provide a wider choice of services throughout Australia. Mr Brown said the government would legislate as soon as possible to provide for the early introduction of supplementary licenses. [Text] [Melbourne Overseas Service in English 0830 GMT 11 Aug 82 BK]

NEW ABC GENERAL MANAGER--The Australian Broadcasting Commission [ABC] today announced the appointment of Keith Jennings as the new general manager of the ABC. Mr Jennings' appointment follows the retirement of Sir Talbot Duckmanton, who held the position for 17 years. Prior to his appointment, Mr Jennings had served as an assistant general manager of the ABC. [Text] [Melbourne Overseas Service in English 0830 GMT 13 Aug 82 BK]

CSO: 5500/2236

BRIEFS

NEWS RELAY THROUGH SATELLITE--The All India Radio Stations at Ahmedabad and Hyderabad have started relaying certain news bulletins originating from New Delhi through INSAT link. Eight more stations--Srinagar, Jaipur, Bhopal, Trivandrum, Gauhati, Imphal, Kohima and Cuttack--are expected to start relaying news bulletins through satellite link by the end of August. [Text] [BK141441 Delhi Domestic Service in English 1530 GMT 13 Jul 82]

RADIO SATELLITE LINK--All stations of All India Radio [AIR] are to be linked through the Indian national satellite--INSAT-1--for relaying programs simultaneously. Linking of 10 air stations with Delhi is expected to be completed by the end of August. The stations are: Srinagar, Jaipur, Bhopal, Gauhati, Imphal, Kohima, Cuttack, Trivandrum, Ahmedabad and Hyderabad. Some of them have already started simultaneous broadcast through INSAT: 16 more stations will have the satellite link by March 1983. All the 85 air stations will be linked through the satellite by the end of 1983. Transmission facility at the Delhi station has already been provided through a mobile earth station. [Text] [BK030409 Delhi Domestic Service in English 0240 GMT 1 Aug 82]

TV COVERAGE--With the establishment of 15 more TV transmitters envisaged in the sixth plan, over 33 percent of the population would be covered by TV programs. Giving this information in the Rajya Sabha, Minister for Information and Broadcasting Vasant Sathe said that at present TV programs are being telecast by 19 centers covering 17.90 percent of the population. [Text] [BK030409 Delhi Domestic Service in English 0830 GMT 2 Aug 82]

CSO: 5500/2238

BRIEFS

TELECOMMUNICATION LINK WITH SINGAPORE--Jakarta, 1 Sep (ANTARA)--The PT INDOSAT (Indonesian Satellite Corporation) Wednesday inaugurated a tele-conference service with Singapore and at the same time installed international telecommunication facilities at Wisma Antara (Antara Building), third floor, Merdeka Selatan 17, Jakarta. Dr Paparak, PT Indusat's president director, in his inaugurating speech, declared that his corporation had instituted new international telecommunication services and would continue to do so. This included the opening of such facilities as well as the institution of a teleconference service. The public services available at Wisma Antara are: international telephone booths, international Telex booths, interconference service facilities. In the whole of Asia only Indonesia and Singapore have the facilities for a teleconference services. [Text] [BK011447 Jakarta ANTARA in English 0841 GMT 1 Sep 82]

MOBILE TELEVISION STATION UNITS--Jakarta, 19 Jul (ANTARA)--President Suharto flanked by Minister of Information Ali Murtopo Saturday symbolically sent off 10 mobile television production station units in a ceremony at Bina Graha. The units each consisting of three vehicles will be stationed in regions still without a television broadcasting station. Before sending off three units intended one each for west Java, central Java and east Java, the president inspected the units, with Television Republic Indonesia (TVRI) Director Subrata explaining technical details and answering questions put by the president. The three vehicles making up each unit comprise one for recording equipment, another for a diesel generator and the third for carrying the 15 crew members serving one unit, including the mobile television unit chief. The 10 units have been bought with a U.S.$14 million West German Government credit, as part of TVRI crash program financed under a U.S.$21 million West German loan. There are now nine television broadcasting stations in the country, one each in Medan, Palembang, Jakarta, Yogyakarta Surabaya, Denpasar, Ujungpandang, Balikpapan and Manado. The nine broadcasting stations are backed up by 155 relay stations to be increased to 200 stations at the end of 1982. [Text] [BK231201 Jakarta ANTARA in English 0805 GMT 19 Jul 82]

MONITORING STATION FOR INTELSAT--Jakarta, 25 Aug (ANTARA)--P. T. INDOSAT (Indonesia Satellite Corporation) has won the International Satellite (INTELSAT) tender as reference and monitoring station for its TOMA (Time Division Multiple Access) and DSI (Digital Speech Interpolation) project, one of the uses of digital technology in satellite transmission. The public relations chief of the directorate general of post and telecommunications, Dr Jamsuddin Tanuathaja, has said that in the framework of utilizing the INTELSAT satellite to the maximum, INTELSAT will be applying the new technology by mid-1984. For the implementation of this INTELSAT plan, several earth stations will be needed which will function as reference, monitoring and control stations. For that purpose INTELSAT has opened the tender, Jamsuddin added. The value of the contract for 5 years services is U.S.$1,259,700. Apart from that, INTELSAT will also lease for 5 years data and speech channels for the sum of U.S.$180,000 per annum or U.S.$900,000 for 5 years. The total sum in foreign exchange expected to be received by P. I. INDOSAT from INTELSAT for 5 years will be more than U.S.$2 million, Jamsuddin said. [Text] [BK270727 Jakarta ANTARA in English 0835 GMT 25 Aug 82]

TV BROADCASTING STATIONS--Jakarta, 25 Aug (ANTARA)--Early after its establishment some 20 years ago, the TVRI (Indonesian Television System) could only broadcast one hour daily and only for Jakarta. But at present it is able to broadcast eight hours daily. The TVRI has now nine broadcasting stations, 210 relay stations and ten mobile stations which are able to operate in rural areas. This was stated by radio, television and film director general, Dr Sumadi in his report at the inauguration of the newly-built TVRI production centre and at the symbolical dedication of the Perumas-built low-cost houses in Dili, East Timor, by President Suharto here Tuesday. [Excerpt] [BK270727 Jakarta ANTARA in English 0810 GMT 25 Aug 82]

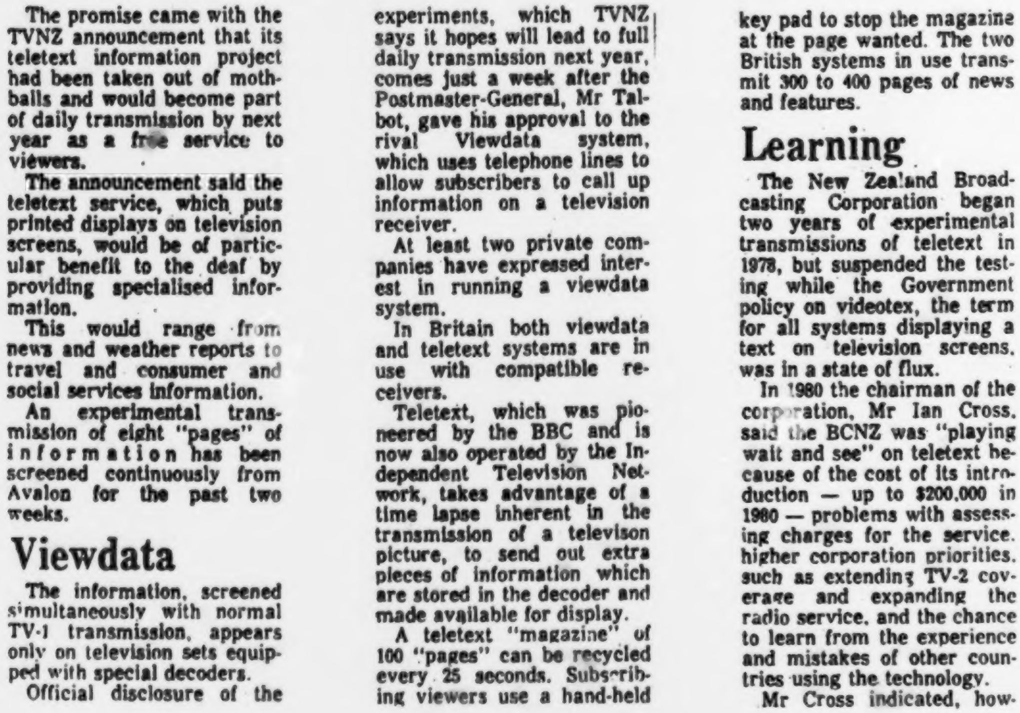
CSO: 5500/2238

TVNZ CONDUCTING EXPERIMENTAL TELETEXT TRANSMISSIONS

Auckland THE NEW ZEALAND HERALD in English 28 Jul 82 p 1

[Article by Colin Moore]

[Excerpts] Shopping by television for the housebound and more enjoyable viewing for the hard of hearing were promised for 1983 by Television New Zealand yesterday.



The promise came with the TVNZ announcement that its teletext information project had been taken out of mothballs and would become part of daily transmission by next year as a free service to viewers.

The announcement said the teletext service, which puts printed displays on television screens, would be of particular benefit to the deaf by providing specialised information.

This would range from news and weather reports to travel and consumer and social services information.

An experimental transmission of eight "pages" of information has been screened continuously from Avalon for the past two weeks.

Viewdata

The information, screened simultaneously with normal TV-1 transmission, appears only on television sets equipped with special decoders.

Official disclosure of the experiments, which TVNZ says it hopes will lead to full daily transmission next year, comes just a week after the Postmaster-General, Mr Talbot, gave his approval to the rival Viewdata system, which uses telephone lines to allow subscribers to call up information on a television receiver.

At least two private companies have expressed interest in running a viewdata system.

In Britain both viewdata and teletext systems are in use with compatible receivers.

Teletext, which was pioneered by the BBC and is now also operated by the Independent Television Network, takes advantage of a time lapse inherent in the transmission of a televison picture, to send out extra pieces of information which are stored in the decoder and made available for display.

A teletext "magazine" of 100 "pages" can be recycled every 25 seconds. Subscribing viewers use a hand-held key pad to stop the magazine at the page wanted. The two British systems in use transmit 300 to 400 pages of news and features.

Learning

The New Zealand Broadcasting Corporation began two years of experimental transmissions of teletext in 1978, but suspended the testing while the Government policy on videotex, the term for all systems displaying a text on television screens, was in a state of flux.

In 1980 the chairman of the corporation, Mr Ian Cross, said the BCNZ was "playing wait and see" on teletext because of the cost of its introduction — up to $200,000 in 1980 — problems with assessing charges for the service, higher corporation priorities, such as extending TV-2 coverage and expanding the radio service, and the chance to learn from the experience and mistakes of other countries using the technology.

Mr Cross indicated, however, that when teletext was introduced it would be done so initially as an aid to deaf viewers.

Last year TVNZ set up a working party in Christchurch, where the weekly "News Review" for the hard of hearing is produced, to study ways to further improve television for the deaf.

The working party, under the chairmanship of TVNZ's Christchurch manager, Mr Ian Richards, and with the support of the New Zealand Rehabilitation League, has now brought teletext out of mothballs.

Mr Richards said yesterday that the "hold" on teletext studies had been taken off over a year ago when the working party started looking at closed-captioning.

He said that after a study trip to Australia to look at captioning systems there was no doubt that the most suitable system was teletext.

Into Sets

Mr Richards said the eight-page test transmission was being sent from Avalon to allow New Zealand manufacturers to develop suitable decoders. Eventually these would be built into television sets.

Mr Richards said he was now preparing his final submissions on the best teletext system to use in New Zealand and its cost before an order was placed with British manufacturers.

While TVNZ has not yet indicated how far it intends to expand any teletext system beyond aiding the deaf, it obviously has a fuller service in mind.

Welcomed

Information paid for by retailers, such as used car prices and grocery specials, can be transmitted on teletext and will recoup the cost of closed-captioning and other social services.

One company which hopes to start a viewdata system in New Zealand, Viewdata Information Retrieval Ltd, last night welcomed the announcement.

The chairman, Mr Michael Horton, said he welcomed the TVNZ moves to expand its services.

Teletext did not compete with viewdata, Mr Horton said, as the two were quite different systems.

Viewdata users could call up particular items of information they wanted, while teletext viewers "get what they are given."

CSO: 5500/9036

GOVERNMENT-BACKED COMPUTER FIRM LOSES SCHOOL MARKET

Christchurch THE PRESS in English 28 Jul 82 p 29

[Text]

PA Wellington

Having been largely removed from the New Zealand schools' computer market by lack of a Government policy on the funding of computers, the Polycorp organisation will have to analyse its future, says its chairman, Mr Murray Smith.

The Polycorp board would meet within two weeks to see what possibilities there were in overseas markets, he said.

"It's not as if we have given up. . . just a few days ago we got a response from one of the companies we approached in the United States."

To achieve in overseas markets would require reasonable resources, and with no decision about the New Zealand market "we are working with one hand tied behind our back."

Polycorp was formed to produce a New Zealand-made computer with $1 million of taxpayers' money advanced by the Development Finance Corporation's applied technology programme. An undisclosed sum was also spent by the Education Department in 1980 and 1981 when its Minister was an enthusiastic supporter of the development.

In delaying a decision about computers in schools late last year, the Government gave time for the Apple Company of California to make its tempting quarter-price offer to the schools market that the Poly was designed for.

Apple received orders from 320 secondary schools for their $1200 computers, but last week, the Customs Department sought $820 in duty on each machine.

Since it was founded six years ago, Apple has been the fastest growing company in the United States, and it is likely to make sales of about $800 million this year. It sees the education field as one of its major markets of the future.

Its attractive offer overtook the slow efforts by the Government to appear to be fair to private enterprise importers by issuing a specification about computer-use in schools.

The duty related to the failure of the Government to adhere to the original intentions of the Poly project, Mr Smith said.

"It should never have got to this point. It should have followed through to full implementation."

The present situation posed big problems on making any further investment decisions, he said.

"Just at the point we are starting to prove ourselves in the market place, an international clobbering machine has come in to hit us.

"Some people will acknowledge that what the Apple Company is doing is genuinely philanthropic. Others might ask why they selected New Zealand to do this, and why now and not two years ago." Mr Smith said.

CSO: 5500/9036

BRIEFS

LOW COST GROUND STATIONS--Pakistani scientists have invented low cost ground stations which have the capability to receive television pictures transmitted by artificial satellites from the outer space. Pakistan Space and Upper Atmosphere Research Commission Chairman Salim Mehmud said in a seminar in Vienna that Pakistan is making every effort to find a place among the developed countries in the field of space research. [Text] [BK141315 Karachi Domestic Service in Urdu 0200 GMT 8 Aug 82]

CSO: 5500/2238

SPACE PROGRAM OUTLINED AT VIENNA CONFERENCE

OW070713 Hong Kong AFP in English 0508 GMT 7 Aug 82

[By Jean-Paul Dufour]

[Text] Vienna, 1 Aug (AFP)--China has sent 11 Chinese-made "scientific and technological testing satellites" into orbit and will launch its first communications satellite in 1983 or 1984, Jiadong Sun, vice-president of the Chinese Academy of Space Technology, said here Friday.

He made the statement at the closing session of "UNISPACE," an international space forum held in the Austrian capital.

"Relying mainly on our own efforts," China has (?devised) since 1965 a major space program for satellites and satellite launchers," Mr Jiadong Sun said.

In 1983 or 1984, the program will pass from an experimental to an operational phase with the launching of the communications satellite.

China has "also considered it an important task to develop cooperation with other countries in the field of space," specially Third World nations.

After a period of improving the testing launch vehicles, "We will be ready to provide other countries...with services for launching satellites and carrying payloads," the Chinese representative said.

"In the meantime, we will be ready to cooperate with other developing countries in the applications of space technology and joint development of space systems," he said.

CSO: 5500/2238

WANG ENMAO VISITS URUMQI SATELLITE STATION

OW280937 Shanghai JIEFANG RIBAO in Chinese 22 Jul 82 p 1

[Excerpts] JIFANG RIBAO report: On 21 July morning, Wang Enmao and other leading comrades of the Xinjiang Uygur Autonomous Region with satisfaction viewed television programs at the Urumqi experimental satellite communications ground station. The programs were transmitted from China's capital Beijing through the international communications satellite over the Indian Ocean. The equipment at the Xinjiang Station was made in Shanghai. The ground satations at Hongqiao in Shanghai and Hohhot in Nei Monggol were also receiving the trial transmission at the same time. [passage omitted]

The responsible comrade of the Hongqiao ground station in Shanghai told the reporters: The two sets of ground station equipment in Xinjiang and Nei Monggol were trial-produced by the No 1 Research Institute of the Ministry of Posts and Telecommunications in Shanghai. Shanghai built four sets of the equipment, including the one being used in the Shanghai ground station. Because it is hard to build microwave relay stations in Xinjiang, Nei Monggol and many outlying and coastal regions in China, people in those regions cannot timely watch the programs transmitted by the central television station in Beijing. At present, China has not yet launched any functional communications satellite. We have achieved preliminary success in trial-transmitting television programs and in transmitting telephone, telegrams and newspaper fascimiles by means of the ground station equipment made by ourselves and the international communications satellite. [passage omitted]

CSO: 5500/2238

BRIEFS

INTELSAT TRANSMISSION TESTS SUCCESSFUL--Beijing, 22 Aug (XINHUA)--Two Chinese-built satellite ground stations, in the Jiangsu Provincial capital of Nanjing and the Hebei Provincial capital of Shijiazhuang, Wednesday passed transmission and reception testing, according to the Ministry of the Electronics Industry. The tests were conducted through an INTELSAT satellite over the Indian Ocean the afternoon of 18 August, the ministry said. Pictures were clear and bright and the sound crisp. The stations are equipped entirely with domestically-made installations. [Text] [OW221312 Beijing XINHUA in English 1251 GMT 22 Aug 82]

TELECOMMUNICATIONS PROTOCOL SIGNED--Ulaanbaatar, 9 Aug (XINHUA)--An experts delegation of the PRC Ministry of Costs and Telecommunications and an experts delegation of the Ministry of Posts and Telecommunications of the People's Republic of Mongolia held talks in Ulaanbaatar from 25 July to 9 August to discuss questions concerning the upgrading of wired telephone and telegraph circuits between China and Mongolia. The two delegations signed a protocol in this regard. [Text] [OW111315 Beijing XINHUA Domestic Service in Chinese 0702 GMT 10 Aug 82]

HONG KONG CALLS REROUTED--With the opening of the Fuzhou-Hong Kong telephone circuit earlier this year, calls from Hong Kong can be transmitted through Fuzhou to other provincial cities and counties. International TELEX service has opened in Fuzhou and Xiamen. Both Fuzhou and Xiamen have imported computer-controlled automatic telephones to improve service between the two cities and other parts of China and abroad. When service of the domestic long-distance line begins at the end of this year, automatic and semiautomatic dialing will be possible between Fuzhou and 20 of China's provincial capitals. Fujian now has telephone lines with 40 countries and regions and telegraph contacts with 100 countries and regions. [Excerpt] [OW121141 Beijing XINHUA in English 0720 GMT 12 Aug 82]

CSO: 5500/2238

BRIEFS

ITA EXTENDS FACSIMILE SERVICE--Taipei, 30 Jun (CNA)--The International Telecommunications Administration (ITA) under the Ministry of Communications announced Wednesday that fast facsimile service between the Republic of China and the Republic of Korea will be formally opened on 1 July. Any person in Taipei can send to Korea in one to two minutes any document, picture, or data if the original paper does not exceed 276 mm long and 193 mm wide. The cost is 400 NT dollars (10.5 U.S. dollars). The ITA stated its International Fast Facsimile Operation in 1979. So far, the service has been extended to some 20 countries and areas. [Text] [OW301431 Taipei CNA in English 1413 GMT 30 Jun 82]

CSO: 5500/2238

BRIEFS

INTERNATIONAL SERVICE TRANSMITTER BOOST--A proposal to increase the transmission power of Radio Thailand so that its foreign language programmes could be received worldwide was approved in a cabinet meeting yesterday. Under the proposal, a budget of 149,950 million baht will be needed for the installation of an additional 250-kilowatt transmitter and for the overall improvement of the station's short wave foreign language services. When the project is completed, listeners in Asia, Middle East, Europe, North America and North Africa will be able to tune in to the foreign language programmes transmitted by Radio Thailand. [Text] [BK290409 Bangkok BANGKOK POST in English 28 Jul 82 p 1]

CSO: 5500/2238

BRIEFS

AFGHANISTAN AGREEMENT SIGNED--Hanoi, 6 Aug (VNA)--An agreement on cooperation between VIETNAM News Agency and BAKHTAR News Agency was signed in Kabul on 2 August. Signatories were Vietnamese Ambassador to Afghanistan Nguyen Sy Hoat on behalf of VIETNAM News Agency, and Abdul Kazman, director of BAKHTAR News Agency. Speaking on this occasion, Nguyen Sy Hoat praised the increasing development of the relations between the two countries and thanked the People's Democratic Party, the government and people of Afghanistan for their support to the Vietnamese people's revolutionary cause. He also re-affirmed Vietnam's full support for the just revolutionary cause of Afghanistan. [Text] [OW061828 Hanoi VNA in English 1524 GMT 6 Aug 82]

CSO: 5500/2238

BRIEFS

NEW RADIO RECEIVERS--Sofia, 23 Jul (BTA)--Specialists at Radio Sofia have designed receivers differing entirely from the previously known. They are condenser-type, their name is "P-1300" and the design is fully suited with the human ear, the new receivers are operated on the principle of two small high quality electrostatic "loud-speakers," reproducing the sound near the ears. They do not tighten, press or deform the cochleas, thus preventing tiredness, the change in the ear's own resoundings and distorting the sound picture. The receivers create a frequency characteristic near the ear which is similar to the one of an ideal loud-speakers put 3 metres before the listener. The "P-1300" receivers are expected to be transferred into batch production. Leading radio-electronic firms of western Europe and Japan appear strongly interested in them. [Text] [AU251452 Sofia BTA in English 1340 GMT 23 Jul 82]

SOVIET OFFICIALS SEE STOICHKOV--Grigo Stoichkov, deputy chairman of the Council of Ministers, has received Josif Ravich, first deputy minister of communications of the Soviet Union. Talks on the further expansion of cooperation between the ministries of the two countries and on the delivery of Bulgarian techology to the Soviet Union were discussed. Pando Vanchev, minister of communications, also attended the talks. Grigor Stoichkov also received Nikolay Slavov, chief of the main administration of the river fleet of the Ukrainian Council of Ministers. Vasil Tsanov, minister of transportation, also attended the talks, which dealt with the possibilities for cooperation in navigation. [Text] [AU251452 Sofia Domestic Service in Bulgarian 1730 GMT 21 Jul 82]

CSO: 5500/2341

BRIEFS

SHORTWAVE BROADCASTS EXPANDED--Bonn, 17 Aug (DPA)--According to CDU/CSU development policy spokesman, Volkmar Koehler, GDR radio has considerably extended the external short-wave service of "Radio Berlin International," mainly for the countries of the Third World. Koehler stated in the union's press service today, (Tuesday), that "Radio Berlin International" is currently broadcasting about 435 hours a week in 13 languages. This was 115 hours more than seven years ago. The main areas for broadcasts were Africa, Asia, overseas as a whole, Latin America, Portugal and Brazil. There is a notable extension of Portuguese, Spanish and English programs for Third World countries. With regard to the content of GDR external broadcasts, he stated that the translated German-language manuscripts were not conceived in the spirit and language of the receiver country so that, despite the "ether bombardment" from the GDR, there was still the hope that the Federal Republic's radio programs would be listened to more readily because they were more in tune with the listeners. [Text] [LD181429 Hamburg DPA in German

CSO: 5500/2238

POLISH ARMY DAILY ON 'SUBVERSIVE' RADIO STATIONS 'CRIMINAL' ACTIVITY

LD230807 Warsaw PAP in English 0700 GMT 23 Aug 82

[From the press review]

[Text] Warsaw, 23 Aug--The army daily ZOLNIERZ WOLNOSCI recalled that early in July Poland lodged a sharp protest at the forum of the UN Committee for Information against the activity of subversive radio stations, in connection with the notorious issue of illegal, incompatible with the norms and provisions of international law, brutal and glaring interference in the internal affairs of our country and deliberate poisoning of the international atmosphere by some radio stations operating in the territory of NATO countries. [sentence as received]

"The activity of Radio Free Europe and Radio Liberty is deliberately and intentionally directed at inspiring subversive, seditious actions in the socialist states, sowing confusion, spreading misinformation and backing counterrevolutionary elements in their attempts to topple people's authority.

"The criminal activity of Radio Free Europe and Radio Liberty [word indistinct] against many spheres of international law, above all, it violates the sphere of human rights, spelled out in the covenant on civil and political rights adopted by the UN on 16 December 1966.

"The existence and activity of the two subversive radio stations also is incompatible with the UN charter provisions and other important documents of international accords banning interference in internal affairs of other states."

"The subversive activity of the Munich-based radio stations is also an act of unilateral, permanent violation of bilateral agreements between Poland and particular capitalist states, including the U.S. and the FRG," the army daily charged.

"We also have the moral right to address our justified claims to the FRG. The permission for stationing Radio Free Europe and other subversive radio stations in West Germany and the tolerance accorded to their subversive activity against Poland is incompatible in every respect with the letter and spirit of the Poland-FRG treaty of 7 December 1970," ZOLNIEREZ VOLNOSCI stressed in conclusion.

CSO: 5500/2238

BRIEFS

SATELLITE STATION--Ivanjica, 17 Aug (TANJUG)--Works are under way on the construction of the new "Jugoslavia II" satellite station near the existing "Jugoslavija I" station in the vicinity of Ivanjica, southwestern Serbia. The works are expected to be completed by the end of 1983, that is in time for the winter olympics to be held in 1984 in Sarajevo, the capital of the Yugoslav Constituent Republic of Bosnia and Herzegovina. The new satellite station will have [word indistinct] links with a satellite over the Indian Ocean. The station will enable automatic telephone, telegraph and television links between Yugoslavia and Australia and the Far East--China, Japan, Indonesia and other countries. Approximately 300 million dinars (approx. 48 dinars to the dollar) will be (?invested) in the construction of this telecommunications facility. [Text] [LD180152 Belgrade TANJUG in English 1711 GMT 17 Aug 82]

CSO: 5500/2341

BRAZIL WILL OWN TELECOMMUNICATIONS SATELLITES IN 1985

PY020449 Buenos Aires LATIN in Spanish 1745 GMT 1 Jul 82

[Text] Brasilia, 1 Jul (LATIN-REUTER)--Official sources reported today that in 1985 Brazil will become the first Latin American nation to own operating satellites in orbit for its telecommunications system.

Communications ministry spokesmen indicated that the Brazilian Government yesterday signed contracts to purchase two domestic satellites and launch them into space at the overall cost of $200 million.

The satellites, which will have 12,000 telephone, TELEX and television channels each, will be supplied by the Spar-Huges Canadian-U.S. consortium which will receive $133 million for both satellites and their subsequent maintenance.

These satellites will be launched between February and July 1985 by the French Arianespace enterprise which will use Ariane-3 type rockets to launch the satellites from the Kourou Base in the French Guyana at the cost of $58 million. An additional $14 million will be spent on insurances, the sources said, explaining that Brazil has obtained loans from Canadian and French banks to finance the program.

The useful life of the satellites will be 8 years and according to communications ministry sources the utilization of these satellites by the Brazilian telecommunications system is economical, feasible and compatible with the nation's needs and size.

Owing these satellites will facilitate the political, economic and social integration of remote Brazilian regions currently virtually unconnected to the national telecommunications system.

Official reports stated that by 1985 a tracking station will be installed in the Amazon region and a land network of 22 antennas will span the entire country.

This network will facilitate the integration of areas, still lacking microwave links, to the national telecommunications system and will provide additional communications to those already endowed with sufficient infrastructure.

CSO: 5500/2238

UAE TO SPEND DH2.5 BILLION ON NEW INVESTMENTS

GF151111 Dubayy KHALEEJ TIMES in English 15 Aug 82 p 1

[by Ahmad Hasan]

[Excerpt] A big increase in government investment in development projects in the country is indicated in the new fiscal year.

The goverment is likely to spend over DH2.5 billion on new investments this year. More than half of the amount is to be invested in development projects within the country. However, nearly DH330 million of public spending by the government will go towards the international communications satellite project, one of the largest in the Third World. It is estimated that the communications project will link up many Third World countries with the West by the end of this decade.

There is another telecommunications project within the Arab world to which the UAE is contributing DH52.6 million Here also the entire Arab world is to be linked up by means of a communications satellite. This satellite is to be linked up with the larger system that will become operational in the Third World countries. It is expected to boost multilateral exchanges in the fields of information, education, culture and technology.

In the UAE itself, the government is spending more than DH6 million to improve telecommunications services within the country as well as links with the rest of the world. EMIRTEL will be the recipient of the allocated amount.

CSO: 5500/2238

AFGHAN MINISTER OUTLINES ROLE OF RADIO, TELEVISION

LD072312 Kabul Domestic Service in Dari 1600 GMT 7 Aug 82

[Excerpts] Dear listeners to Radio Afghanistan, according to the tasks specified in the PDPA Action Program which says that the word of party and government should reach the ears of the working people, and in order to realize the resolutions of the Ninth PDPA Central Committee Plenum that the people should learn more about the objectives of social, economic and cultural plans of the party and government, and in accordance with the resolutions of the PDPA Central Committee Secretariat, a specific radio and television program has been prepared for each of the ministers.

Therefore, now we draw your attention to the speech by 'Abdol Majid Sarbuland, deputy chairman of the Council of Ministers and minister of culture and information:

[Begin Sarbuland recording] [passage omitted] The main branches of mass media, responsible for the explanation and propagation of the revolutionary aspirations and policies of the DRA Party and Government are radio and television, which can play an enormous role in the political education of the masses.

After the April revolution and especially after the victory of the new development stage of the revolution, major, qualitative and quantitative changes can be seen in the work of these two branches of mass media. For example:

The creation of new political, economic and art programs such as radio The Voice of People, Revolutionary Guards, Sarandoy, Worker, [words indistinct] and Soldier's Voice, and others, in radio and television; the increase in interviews and talks by workers, peasants and other toilers concerning their work, life and revolution on radio and television; the radio broadcast of 30-minute programs for the fraternal nationalities of Afghanistan in their own languages and music programs for the fraternal nationalities of Afghanistan on television; the broadcast of documentary reports for the provinces; the extensive broadcast and [word indistinct] of decisions and resolutions of the party and government and the provision of the PDPA Central Committee's outlines via different programs; interesting programs introducing the socialist countries and explaining the peaceful and humane policies of these countries; and preparation of programs on the Western world.

Exposing the nature of imperialism and its interference in our revolutionary country; exposing the conspiracies and the dirty faces of the counterrevolutionary rebels, thieves and murderers; the broadcast of various programs introducing the true culture of the country, and the preparation of different musical, drama, and historical programs; the broadcast of party programs to strengthen national unity and strengthen relations between the party, people and government.

Radio Afghanistan at present broadcasts 17 hours a day and television broadcasts daily around 5 hours and 45 minutes. These two important means of communication, despite various difficulties arising from budget, shortage of skilled personnel and necessary buildings, consistently continue their work for the realization of the resolutions of the national conference and the Ninth PDPA Central Committee Plenum. In order to maintain this objective, they will carry out expansion and improvement of the level of broadcasts in the capital and the provinces. [passage indistinct]

The construction of a new radio complex with the assistance of the friendly GDR, whose preliminary work is underway, and also the new television complex which will be built with the assistance of the Soviet Union in the future, will enable these two important means of mass communication to carry their great responsibilities. [passage omitted]

CSO: 5500/2238

PLANS TO EXPAND NATIONAL COMMUNICATIONS SYSTEM DISCUSSED

Tehran KEYHAN in Persian 19 Jul 82 pp 5, 15

[Interview with Minister of Post Telegraph and Telephone Morteza Nabavi]

[Text] Expanding the communication system by means of communication and postal coverage, improvement of their quality and efficiency, the condition of these networks in war stricken areas and the means to reconstruct them, production of the necessary tools and equipment of the communication industry within the country, steps taken to attain self-sufficiency, reducing the communication needs of the oppressed, especially in villages and remote areas, policies in regard to providing telephones to applicants in Tehran and other large and small cities, and remedying the situation of the applicants who have telephone vouchers from a few years ago, were some of the problems that people ask about by either contacting the newspapers, asking interviewers and reporters or inquiring at communication and postal offices.

To hear the answers directly from the responsible authorities, we interviewed Mr Morteza Nabavi, the minister of post, telegraph and telephone. In this interview we discussed these and related questions as follows:

In the beginning of this interview, brother Nabavi, answering our first question in regard to preparing plans for the reconstruction of the war stricken areas and the plans to implement these plans in the areas with priority, said, "For some time, plans have been prepared by our brothers for the reconstruction of the war areas with the cooperation of the plan organization with two priorities. It is not possible to discuss all these plans. Therefore I will refer to them only. First, regarding the postal services, I have to mention that the building and equipment of our post offices in war stricken cities are totally demolished or have been seriously damaged and our first priority is to construct or repair the buildings of the post offices of Sar-e Pol-e Zahab, Trokdis, West Gilan, Beriz Ab Sar-e Pol-e Zahab, Gur-e Sefid, Shahsavar Qureh, Ozgoleh, Sumar, Khazdireh in Bakhtaram Province, the post offices of Bashmaq Savoji Marivan, Sar-e Fil Paveh and Nosad in Kordestan Province, the post offices of Dehlaran in Ilam Province, Berim, Arvand Kenar, Jadadeh, Abadan, Shush Danial, Susangerd, Bostan and Harizeh in Khuzestan Province and the post offices of Bukan and Ashnavieh in West Azarbaijan Province. The second priority will be the post offices of Naft Shahr, Khosravi, Qasr-e Shirin Bakhtaran Province and the post offices in Musian, Cham Hendi, Mohsen Ab Mehren, Patok and Mersian in Ilam Provinces. The estimated expense for the plans of the first priority is 74,386,000 rials and for the second priority, 56,435,000 rials, bringing the total for both priorities to 130,721,000 [sic] rials."

He added, "In regard to sending telegrams, we anticipate the reconstruction of telegraph buildings and microwave equipment in the damaged areas, on a priority basis. Some of the areas to be included are Khosrow Abad, Bostan, Andimeshk, Shush, Danial, and Dehlaran. The planning for local and connecting cables for war stricken provinces like Ilam, Khuzestan and Bakhtaran has been considered with two priorities as part of the plan."

The minister of post, telegraph and telephone continued: "The plans that I just referred to are projects which are prepared for the first time and they had to be approved by the economic council and their estimated budget is 64 million tumans. Currently the economic council has approved 38 million tumans of it. It was agreed that with this approved budget, the brothers review their projects again and start programs that have the first priority and they have done this in some cases. Among them is the reconstruction of certain buildings which have been started and thus many villages and camps are able to communicate with each other. We plan to increase the number of these communication systems.

"The total of needed credits for reconstruction and new construction of communication systems and making the necessary projects for war regions in both priorities for the year 1982-83 is 376.22 million rials and 273.17 million rials in foreign currency for a total of 649,192,000 rials. The anticipated credit for the communication system for the next 10 years is 2,128,192,000 rials."

Providing Communications for Villages

Then brother Morteza Nabavi, about measures taken in regard to increasing the capacity of post, telegraph and telephones in the villages and remote areas said: "In principal, after the victory of the revolution, the governments line of policy and planning has been based on solving the needs of the oppressed and in the Ministry of Post, Telegraph and Telephone noticeable steps have been taken in this regard. For example, we could compare the statistics of telephones given to the villages under the old regime with the statistics of telephones given to the villages after the victory of the revolution. For example, in 1975, the previous regime had given telephones to only 16 villages and in 1976 also to 16 villages and in 1977 to 22 villages. From 1964 to 1977 this was the largest amount of telephones given to the villages. Immediately after the victory of the revolution we see that in 1979, 50 villages have received telephones, in 1980, 100 other villages, and in 1981, 240 villages have been given connections. Of course it was anticipated in 1981-82 to give telephones to 550 villages, but due to economic sanctions and the existing shortages, we were not able to meet this limit and we hope that with long term programs to be able to give telephones to 400 villages a year and with the help and cooperation of the people we could exceed this limit.

"I have to add here that we have tried to give more telephones to the remote and deprived provinces like Sistan and Baluchistan and cities like Iran Shahr, Khash and Chahar Bahar. In this case, we use our efforts wherever a center for rural services is established, we also will be able to provide them with communications and postal services and I think we are ahead at the present, since we have provided communications and postal services in some villages prior to the establishment of the center for rural services."

Brother Nabavi continued and said: "In regard to postal services, our goal is with God's help, over the next 10 years, to extend postal services to the farthest parts of the country and all parts of the cities and villages. We hope that with God's help, during the coming 20 years in four, 5-year plans to provide one post office for each 5,000 people. At present we have 1 city post office for every 28,460 people."

Then brother Morteza Nabavi, minister of post, telegraph and telephone, regarding steps taken to end dependency on western countries and for attaining self-sufficiency said: "To end dependency, efforts have been made by our dedicated and expert colleagues and all efforts are for becoming self-sufficient as soon as possible. However, one must realize that communication systems are very complex and to build them is not an easy job and requires a lot of effort. However, the center for communication studies, which was rebuilt in the time of martyr Qandi, and the work of our dedicated and specialized forces in this center were able to take action in ending communication dependency. The manner of work at this center is as follows: They have tried first to prepare a sample of severely needed communications equipment which could be produced in the country and is not the monopoly of any industry and then start production. One of the successful projects of this center is the project for manufacturing public telephones and the production contract has been signed. This center also has many other projects at hand and we hope that one after another they can be accomplished."

He added: "Another good move of this center is in the direction of cutting dependency in the maintenance and repair of communication equipment and with around the clock effort of our experts and without the help of foreign experts, this can be done within the country. To repair complex equipment, the scientific and technical groups of some universities have helped too."

Brother Nabavi continued, "In regard to the installation of equipment there has been outstanding progress and we had around $110 million worth of contracts with foreign countries to fulfill this task. We have canceled these contracts and our devoted and dear colleagues themselves have installed this equipment including the installment of the STD or electromagnetic telephone system. In the planning section, planning was not done by Iranians and basically, the plans were not distinguished so our dear and devoted brothers started the planning of the national communication system network and I could say that we were ahead in many respects and are in good condition considering that planning a national communication system is not an easy job.

"In respect to producing equipment in Iran, I must say that the communication industry in Shiraz, whose employees, especially the members of the communications Islamic society with their devout management, have been able to reach the maximum level of production of 100,000 lines in the last year and attach a 90 percent limit of self-sufficiency. The skillful molders of these factories have designed and made most of the delicate molds themselves. However, I have to say that our main dependency in these factories is raw materials and fortunately we have found different markets to purchase them and it is not monopolized anymore."

Brother Nabavi added: "Another factory is working under the supervision of this ministry. Before the revolution, this factory was mounting and damaging the readymade pieces, but now with a different management and more active workers, has taken effective steps in making the necessary equipment and at present produces VHF and UHF radio equipment. It is worthy to mention that our colleagues in some cities have invented several instruments which are helpful for our self-sufficiency. Among these inventions are an alarm system and a special clock for 24-hour rate change control. A seminar has been planned in order to encourage our inventors to improve work conditions and to involve all our colleagues throughout the country in communications self-sufficiency.

"Among the interesting activities in the direction of self-sufficiency is the telex system. Our brothers, in rewriting the computer programs for telex, were able to free over 1,000 lines and to reconstruct the old "electro mechanic" telex centers and put them in working order again and to adjust them to the new system and make 600 additional telex lines available. Although at first we did not have one telex line to turn over, we were able to turn over 1,600 telex lines to the customers and in this manner, for a long time, we do not need new telex systems. A long term plan has been prepared with the help of our colleagues from the Sharif Industrial College in order to start domestic production completely."

The minister of post, telegraph and telephone then talked about the steps taken for the improvement of postal services and said: "To improve the quality of postal services, a long-term plan in four, 5-year plans has been prepared God willing, and we will be able to improve the postal situation in quality and speed to a reliable limit. For this purpose it is anticipated that mail will reach its destination in a specified time and if this program is accomplished, we will not need to use the telephone in certain cases. To improve the postal quality we have embarked on a coding project and for this purpose we have made five-digit zip codes for each house or shop on each street and this makes the job of our mail distributors and postal workers much easier and the mail will reach its destination in a shorter time and without mistakes. The center for mechanized postal services in Tehran will start its work very soon. This center has an effective role in speeding mail distribution. We ask our dear people to write the zip code clearly on the designated place on the envelope and help our postal workers in the post offices in this manner. We ask the noble people of Iran to pay more attention to the mail services, since mail is the only method that does not increase dependency."

Providing Telephones for Paid Requester

Brother Morteza Nabavi, in regard to plans for giving telephones to those with telephone down payment slips said: "I have to mention that some electronic equipment was installed by Americans before, and after the victory of the revolution, they left Iran and they took the documentation for the equipment with them so that we could not refer to the plans and start this equipment.

The expansion, strengthening and improvement of postal services could decrease the telephone traffic load which is one of our communications problems at the present time.

To provide rural communications and extend coverage to deprived areas is the priority of national communication.

But fortunately, with around the clock efforts of our colleagues, we started part of this equipment and some more will start to work in the coming years and gradually telephones will be given to the applicants with vouchers. However, I have to mention this fact to the people, that due to the limited possibilities and from the viewpoint of dependency involving the improved communication systems and also because of the short period of domestic production, we will not be able to meet the demand of all the applicants with vouchers. We will try to eliminate this problem by improving the mail services in order to replace the use of telephones to some extent, and secondly, to increase the number of public telephones in order to meet the urgent needs of the people."

He added: "Our priority in giving telephones is to: government agencies, the revolutionary movements, the armed forces, the guard corps and also the agriculture, economic and industrial centers. Parallel to this, we use our efforts to increase local services until God willing, we can meet the people's needs. I have to add here, in order to be able to take steps toward communication independence we are in great need of people and clear-sighted persons. Here I ask the experienced people if they have any ideas for the improvement of postal communications systems and related equipment to send it to us, until with God's help, we can use them. I am sure that without their help, we will never be able to transform our systems to a working one for the Islamic Republic of Iran."

The minister of post, telegraph and telephone in conclusion said, "Our duty is to communicate and most of the radio and television communications are via communication networks. We cannot overlook the role of propaganda in today's world, and we have to remember the bitter fact that 98 percent of the world's communications networks are controlled by Zionists and imperialists and this fact makes our responsibilities much heavier. To eliminate our needs we need all the scientists and ask them to help us in this regard, so we will be able to have networks to meet our needs and enable us to send the voice of the revolution and the voice of justice to the farthest village within the country as well as across our borders.

9815
CSO: 5500/5348

'ETTELA'AT' ANNOUNCES WORK ON RADIO CENTERS

GF011317 Tehran ETTELA'AT in Persian 24 Jul 82 p 2

[Text] According to the latest issue of the publication of the public relations department of the Voice and Vision of the Islamic Republic of Iran, construction of the powerful 800-kw transmitter in Bandar Torkaman has been completed and its installation has begun with the cooperation of the planning and installation unit and the Gorgan Center [of the Voice and Vision of Iran].

When this transmitter goes into operation, it will be capable of transmitting the Voice of the Islamic Republic to the ears of more than 50 million Muslims in the southern Soviet Union. As an independent unit, it will also cover a large hitherto deprived area in the Torkaman (Sahara) region.

According to the publication, the management of the Voice and Vision of the Islamic Republic of Iran, Gorgan Center, was successful in acquiring 3.5 hectares of hilly land south of Gorgan City which previously had belonged to a feudal landlord for construction of the radio and television building of this center. Plans for the construction of the Gorgan Center are underway and the blueprints are being prepared. The publication adds that the FM radio transmitter of Kish Island went into operation last week with the assistance of technical personnel from Tehran.

CSO: 5500/2238

BRIEFS

RADIO-TELEVISION NETWORK EXPANSION--Tehran, 12 Jul (IRNA)--Radio and television programmes will be covered inside the country by artificial ground satellite and due to its cost is a good investment, said Mohammad Hashemi Rafsanjani, the managing director of the Voice and Vision of the Islamic Republic of Iran (VVIRI) and the technical deputy of that organisation. His statements followed a meeting with Prime Minister Hoseyn Musavi, on Monday morning. Rafsanjani also added that in that meeting the expansion of the radio television network was discussed. Mohammad Rafsanjani, in reference to TV programming said that after the holy month of Ramadhan, there will be positive changes especially in the area of movie films. We added that in this field some Iranian missions had been dispatched to foreign countries to purchase films consistent with the dignity of Islamic morality and the system of the Islamic Republic of Iran. [Text] [LD122036 Tehran IRNA in English 1946 GMT 12 Jul 82]

CSO: 5500/2238

BRIEFS

UAE JOINS INTELSAT--Abu Dhabi, 29 Jul (UNI)--The United Arab Emirates (UAE) has become the 42nd member of the International Marine Satellite Organisation (INTELSAT), it has been announced here. INTELSAT works to improve maritime communications through satellites. It also seeks to promote the peaceful use of space communications. The UAE recently enacted a commercial maritime law to foster the country's maritime fleet. The law requires all UAE vessels to fly the flag of the country. [Text] [GF311237 Kuwait ARAB TIMES in English 30 Jul 82]

CSO: 5500/2238

BRIEFS

PROVINCES REJOIN TELEX SYSTEM--Mozambique's northern provinces of Tete and Zambesia have been (?restored) to the country's TELEX system. An official of the state communications firm said that extending the TELEX system to the northern provinces became possible when a new TELEX center was opened in Maputo earlier this year. Tete Province has been without TELEX communication since 1976 when facilities at (Chikwalakwala) and Gaza Province were destroyed by the Rhodesian Air Force. Zambesia Province has never had TELEX communications. [Text] [MB261009 Maputo International Service in English 0400 GMT 26 Aug 82]

CSO: 5500/2238

BRIEFS

SWAZILAND EARTH SATELLITE STATION--A report from Mbabane says building is expected to begin soon on a $4 million satellite earth station in Swaziland to bring telecommunications services to international level and to reduce dependence on South Africa. The station will also enable Swaziland to receive live television transmissions from Europe and the United States. The Export Corporation in Canada has provided $3 million for the project which should be in operation by June next year. Swaziland has also signed an agreement with the Canadian Government for a grant of about $900,000 to send technicians, engineers and accountants to Canada for training in satellite communications. [Text] [LD300620 Johannesburg International Service in English 0630 GMT 29 Jul 82]

CSO: 5500/2238

LAW ON NEW BROADCASTING AUTHORITIES PUBLISHED

MB291141 Mbabane THE TIMES OF SWAZILAND in English 29 Jun 82 p 1

[By James Dlamini]

[Excerpts] A new body has been established to monitor and censor TV programmes.

A bill published in the latest government GAZETTE states that the new body will, "without prejudice to any other law, monitor the content of programmes and other transmissions to ensure that they conform with acceptable moral standards."

It is to be known as the Swaziland Television Authority Board of Control (STABC).

It will consist of five members appointed by the deputy prime minister. The members may hold office for a period of three years.

"The general manager of the station, with respect to the content of the programmes and other transmissions, will have full editorial freedom within the guidelines prescribed by the Board of Control," it is stated in the GAZETTE.

The bill is known as the Swaziland Television Authority Bill and is to be tabled during the next session of Parliament by the deputy prime minister.

The bill establishes the National Television Broadcasting Service (NTBS) to replace the Swaziland Television Broadcasting Corporation (STBC).

The television authority will be responsible for erecting TV stations in Swaziland and will maintain all TV facilities.

It will have power to implement controls in regard to TV rentals, selling and dealing in television receivers and associated equipment.

It will be responsible for the technical quality of the station and duration of broadcasting time. The authority will acquire the sphares, assets and liabilities from the government and carry on the functions and run the business of the station.

A board of directors will run the affairs of the authority on its behalf. The chairman of the board of directors will be appointed by the DPM.

Other members of the board will be drawn from the DPM's office, the Minister of Education, Ministry of Finance and Ministry of Commerce, Industry, Mines and Tourism. Three other non-civil servants will be appointed by the DPM at his direction.

The general manager of the NTBS shall be an ex-officio member of the board. [passage omitted]

The government bought STBC's assets for E2 million after supplementary estimates were approved by Parliament earlier this year. [passage omitted]

CSO: 5500/2238

BRIEFS

FRENCH AID FOR TRANSMITTER--The Kinshasa Television Transmitting Station will be functioning again very soon. A 10 kilowatt transmitter will soon be installed. A sum of FR 5.5 million will be released for this under an agreement signed between the Executive Council and the French Government. This is one of the three financial agreements involving a sum of FR 10 million to be granted to Zaire for the implementation of a number of projects within the framework of bilateral cooperation. The second agreement provides for an aid of FR 3.5 million to be used in equipping workshops, training personnel and providing technical assistance at the Industrial Technical Institute at Maluku and in Kinshasa. The third agreement involves a sum of FR 1 million which will be given to the planning unit of the Ministry of Agriculture, Rural Development and Environment. [Text] [AB191247 Kinshasa Domestic Service in French 1130 GMT 19 Aug 82]

CSO: 5500/2238

BRIEFS

INTERNATIONAL MICROWAVE NETWORK--Work on the construction of a microwave network to link Zambia, Zimbabwe and Botswana has started. Norwegian vice-consul, assistant resident representative in Zambia, (Isak Helseg), has said that the construction of the infrastructures, like towers and roads of the nicrowave network to link the three countries, started early this year in Zimbabwe and Botswana. An agreement paving the way for the implementation of the microwave network to link Zambia, Zimbabwe and Botswana was signed in April this year by Norway and Sweden, who are undertaking the construction work on one hand, and the three governments on the other. Mr (Helseg) said that work on the construction of the microwave network was going on according to plan, and that it was expected to be completed in March 1984. [Text] [MB190614 Lusaka Domestic Service in English 1800 GMT 11 Aug 82]

CSO: 5500/2238

VOLGOGRADSKAYA OBLAST SATELLITE TV DEVELOPMENTS

PM031329 Moscow IZVESTIYA in Russian 26 Jul 82 morning edition p 3

[Yu. Kasyanov report under the rubric "Leisure": "Television Programs Across Space"]

[Text] Volgograd--A new station to receive television broadcasts across space from a communications satellite has been commissioned in the settlement of Elton in Pallasovskiy Rayon.

This guarantees the people of Elton excellent color picture quality on domestic screens. Hitherto television reception in Elton has been uncertain, with a lot of interference.

In the very near future similar installations will appear in the Village of Gmelinka in Staropoltavskiy Rayon and in the City of Pallasovka, the big center of eastern Volgogradskaya Oblast. The central Asia-center, Soyuz and Orenburg-western border gas pipelines pass through these places, and irrigation canals have been constructed. In short, many people have begun living there, and there are television sets in every home.

The need to create the potential for stable and reliable reception of television broadcasts in these once totally deserted places is very great, and modern Soviet apparatus has made it possible to resolve this difficult task successfully.

CSO: 5500/2238

BRIEFS

TELEVISION RELAY STATION COMMISSIONED--Shevchenko--Oil industry workers now have a color television service in their site accommodation on the Busachi Peninsula, where a "MISKVA" relay station has been commissioned. Almost all the residents of Mangyshlakskaya Oblast are now able to watch television broadcasts. [Tass report under general heading: "Newly-Commissioned"] [Text] [PM181409 Moscow TRUD in Russian 15 Aug 82 p 1]

CSO: 5500/2238

BRIEFS

NEW PRESS OFFICE--The press and public relations office "KIMON PRESS" has begun operating in Larnaca under the direction of journalist E. Evangelidhis. The new office is on Apostolou Varnava Street, behind the main offices of the Bank of Cyprus, and deals with the distribution of news to mass media as well as with advertising and public relations. [Text] [NC210717 Nicosia O AGON in Greek 21 Aug 82 p 10]

CSO: 5500/2236

STATIONS COMPETE TO USE FUTURE DIRECT BROADCAST SATELLITE

Paris LE NOUVEL ECONOMISTE in French 26 Jul 82 p 21

[Article by Daniele Granet: "Satellites: the Younger Sisters, Channels TF-1 and A-2"]

[Text] Problem: How to finance two new television channels without increasing the television fee which provides the bulk of the income of the other three channels? Georges Fillioud, minister of communications, provides his answer. On the basis of a "fee" [peage] for the fourth channel and advertising for the fifth channel, he said on 18 July to JOURNAL DU DIMANCHE.

This is a solution which the previous government would not have disapproved. There has never been any question of having the channels paid for directly by television viewers, whose annual user charges, which are similar to taxes, increase from year to year. The television fee is up by 18 percent in 1982, or 424 francs for color television and 280 francs for black and white. The fee will go up by at least 10 percent in 1983. Television, which has just been placed on a systematic basis by the Fillioud bill, is an enormous machine of 16,142 employees which swallows up taxes and advertising income: 1.5 billion francs for 1981 and 1.8 billion francs for 1982. The smallest scale program costs a great deal: 70,000 francs for an hour of Michel Polac; 1.2 million for an hour of drama. However, the deficits are carefully hidden away, except for the most notorious—that of the French Production Company, with its 3,000 employees, which has announced a loss of 80,000 francs for 1982.

If today, like yesterday, the politicians were forced to use advertising techniques, they would fight over the same issue: preserving for the French Government control of the channels allocated to France by the International Telecommunications Union in 1977. However, like the government of President Giscard, the Socialist government is faced with a cruel alternative: you cannot keep the channels without using them. Now, use for the channels allocated is programmed for 1985, the year when the first direct broadcast satellite, TDF-1, is scheduled to be launched; then, in 1986, a second direct broadcast satellite. The first satellite will carry three channels. Two of them have already been assigned: TF-1 and A-2. Thus, all the French, whether living in the plains or the mountains, will be able to receive television programs down from the sky. The second satellite will also have three television channels. Two channels will be set aside for security purposes in case a breakdown should interrupt broadcasts on TF-1 and A-2. Thus, two channels remain. One on the first satellite, earmarked for the fourth television channel and one on the second satellite earmarked for the fifth television channel. On paper the division of channels is easy, but cabinet objectives concerning the two new television channels are still not fully defined. The only thing certain is that the fourth channel, called the "movie channel," with a fee paid for each one of recent films viewed, has been abandoned. The fourth channel could be used during the day by large companies, government ministries, local government bodies, for professional audiences who would pay a fee. The service channel could also transmit cultural and educational programs. Regarding the fifth channel, scheduled for 1986 and entirely financed by advertising, it would be operated by a half-public, half-private company. This is a solution which has two advantages. First of all, it would attract the major advertising firms, such as Havas, Hachette, Europe I, and so forth--and why not CLT [expansion unknown]--while keeping a firm hand on the satellite and in particular obtaining income from French advertising firms, which otherwise could find a market among our French-speaking partners, who are also ready to launch their own satellites.

For the public in general the essential question remains the programs. A fifth channel, supported by advertising in the American fashion, would mean programs paid for by advertising. Up to now Jacques Thibau, negotiator for the president of France, who has been engaged in defining the rules of the game of European audiovisual space, has opposed this solution. However, he who pays will decide. In the words of Minister Fillioud, "Advertising is not the work of the devil." However, if advertisers are ready to "sponsor" films, dramatic series, sports, games, and so forth, will they also be ready to "support cultural themes"? In any case, competition has just come back in through the back door because of a simple matter of money.

5170
CSO: 5500/2317

BRIEFS

DIRECT BROADCAST SATELLITE CONFERENCE--An intergovernmental conference on efforts to establish a European audiovisual area, involving the development and use of direct broadcast satellites, communications by cable and audiovisual editing, was held in Paris on 19-20 July. This conference, held at the invitation of the French Government, brought together representatives of the FRG, Austria, Belgium, France, Luxembourg and the Netherlands. According to a reliable source, it is believed that after this first conference a second conference will take place in the latter half of November among the European countries, which will agree to three principles: freedom of circulation of information, respect for cultural pluralism and respect for the expression of the various cultures, and the development of all forms of audiovisual cooperation. [Text] [Paris LES ECHOS in French 26 Jul 82 p 6] 5170

CSO: 5500/2317

CABLE TV GETS GO-AHEAD TO SHOW SOVIET PROGRAMS

PH130827 Amsterdam DE VOLKSKRANT in Dutch 6 Jul 82 p 1

[Unattributed report: "Russians Give Permission for Cable Television Broadcasts"]

[Excerpt] Amsterdam--Yesterday the Soviet Union indicated that Netherlands cable television networks can transmit Russian television programs. Arnhem telecommunications equipment manufacturer W. J. Van Huenen was informed of this in a TELEX message from the Russian equivalent of BUMA [expansion unknown], the OVTOR [expansion unknown] bureau.

The permission will cause changes in the policy of the Culture, Recreation and Social Welfare Ministry, which up to now has refused to approve these broadcasts because the Russians had not given their permission. The Russians have stipulated that when programs are received from satellites and transmitted further copyright should be paid via the BUMA and STERMA [expansion unknown] bureaus. Van Huenen remarked that in this respect the Russians are showing a more businesslike attitude than other countries, because the others are not asking for payment.

Up to now there are three municipalities in The Netherlands transmitting Russian broadcasts on their cable networks--against the wishes of the Culture, Recreation and Social Welfare Ministry, and municipalities like Hellendoorn have already stopped transmitting Russian programs because of the Culture, Recreation and Social Welfare Ministry. [passage omitted]

CSO: 5500/2238

PRESIDENCY ISSUES NOTE ON 'ANOP'

LD150348 Lisbon Domestic Service in Portuguese 2000 GMT 14 Aug 82

[Text] The presidency of the republic has issued the following official note through presidential spokesman Joaquim Letria:

[Begin Letria recording] During their customary weekly meeting, held yesterday, the president of the republic told his excellency the prime minister that he was to call a halt to any moves in progress aimed at winding-up the news agency ANOP before the promulgation of legislation that would legitimize such an action.

The president of the republic's decision is grounded on his absolute refusal to accept any fait accompli which, should they come to pass, would constitute a form of political illegality hitherto unheard of in Portugal whereby a public enterprise created by legislation and promulgated by the president of the republic would for all practical purposes be liquidated before the approval of the council of ministers or the assembly of the republic and before the promulgation by the president of the republic of the piece of legislation determining the aforesaid liquidation.

There are norms in the law of a democratic state the transgression of which cannot be admissible whatever the circumstances. A decision that only becomes valid after the promulgation of the respective law or decree cannot be translated into actions or official undertakings before being enacted as law.

Some of the news media have referred to the government's alleged intention to close ANOP for all practical purposes before the president of the republic's pronouncement on the respective piece of legislation; and it emerges that such an interpretation is without foundation insofar as his excellency the prime minister has, among other things, given the president of the republic the following assurances:

1. The government has not decided on closing ANOP.

2. No decisions will be made or actions carried out concerning the winding-up of ANOP before the respective piece of legislation is submitted by the government to the president of the republic for promulgation.

3. The government has entered into no undertakings concerning a new news agency.

4. Neither the government nor any members thereof have signed any protocol with persons or organizations interested in the creation of a new news agency. [end recording]

Nevertheless, a resolution of the council of ministers has already been published in the official GAZETTE giving the secretary of state assistant to the prime minister for mass media affairs and the secretary of state of the [illegible]iget sufficient powers for undertaking demarches with a view to contracting for news reporting services from persons or organization which, giving guarantees of accuracy, pluralism and rationality of costs, may contribute to the provision of a news service to Portugal, the Portuguese communities abroad and the Portuguese-speaking countries.

CSO: 5500/2238

PRIME MINISTER'S OFFICE REPLIES TO PRESIDENCY ON 'ANOP'

LD160920 Lisbon Domestic Service in Portuguese 2230 GMT 15 Aug 82

[Excerpts] Following yesterday's communique from the presidency of the republic on the case of the ANOP News Agency, it was the government's turn today to reply through a spokesman of the prime minister's office.

[Begin unidentified spokesman recording] With reference to the communique released yesterday by the presidency of the republic, the following is hereby made clear.

1. Concerning the future of the public enterprise ANOP, the government has conducted itself as it invariably does, that is, with total respect for democratic legality and the national interest. In this context the submission to the president of the republic for promulgation of a decree-law determining the winding-up of ANOP can take place only after the necessary legal procedures have taken their course within ANOP in the wake of the resolutions adopted by the council of ministers.

2. The management of the general state budget, once duly approved by the assembly of the republic, belongs to the government and to the government alone, that is, the allocations to be made to the state-owned enterprises as subsidies. Likewise, it is for the government and the government alone, whenever it may deem fit and in accordance with the laws of the land, to contract for whatever services it may deem useful for the prosecution of the goals laid down in its program, which program was approved by the assembly of the republic in the terms of the constitution, specifically to contract for the provision of a regional news service and the expansion of news dissemination to areas of fundamental importance to Portuguese foreign policy such as the Portuguese communities abroad and Portuguese-speaking countries.

3. The reaffirmation of these principles has appeared necessary because the communique from the presidency of the republic on the matter of ANOP states that there are norms in the democratic state of law whose transgression can on no account be admissible. Because this is precisely the view of the government it will not be out of place to point out that prominent among the said norms there is one which requires that all the organs of sovereignty must respect the powers and areas of jurisdiction of the others even, and especially, when legitimate decisions made by one of them may not be to the political liking of one or more of the others. [end recording]

Asked to comment on the government's communique, presidential spokesman Joaquim Letria said that there is nothing to add to yesterday's communique, and recalled the pledges made by the prime minister to the president of the republic.

[Begin Letria recording] The presidency of the republic has no comment on the communique issued by the prime minister's office. The presidency of the republic merely stands by everything it stated in yesterday's communique. [passage omitted covered by referent item] [end recording]

CSO: 5500/2238

NEWS NATIONAL AGENCY TO REPLACE 'ANOP' SOON

NC252119 Paris AFP in English 2054 GMT 25 Aug 82

[Text] Lisbon, 25 Aug (AFP)--A new Portuguese news agency that has the blessing of the center-right government of Premier Francisco Pinto Balsemao began its official existence here today.

Named Noticias de Portugal (Portuguese News, or NP), it is a cooperative of 17 non-leftist press and telecommunications media slated to take the place of the existing left-leaning national news agency, the state-subsidized ANOP.

ANOP grew out of the 1974 revolution against the country's extreme-right dictatorship--and Portugal's left-oriented president, General Ramalho Eanes, opposes its disbandment.

In a major political controversy over the issue, the Pinto Balsemao Government, which takes a dim view of nationalized industry at large, has already announced it will cut off government subsidies from ANOP shortly, thereby forcing it to close.

But President Eanes has indicated he will not sign the decree sealing its demise.

Management of the new NP agency has been turned over to Portugal's national radio network, seconded by DIARIO DE COIMBRA, a major provincial paper, and the WEEDY TEMPO. Its seat will be in the former television building here, and its operations are to begin in mid-September.

The closing of ANOP, which was scheduled for the end of this month, has been postponed to October, when its activities are to be gradually phased out.

CSO: 5500/2238

END

JPRS 81852

27 September 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 240

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 81852

27 September 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 240

CONTENTS

ASIA

LAOS

Briefs
Wire Radio Assistance 1

PEOPLE'S REPUBLIC OF CHINA

Briefs
Guangdong Buys Telecommunications System 2

THAILAND

Briefs
Southern Television Expansion 3
Telecommunications Accord With Japan 3

LATIN AMERICA

BERMUDA

Three More Satellite Dishes Will Boost Media Coverage (THE ROYAL GAZETTE, 20 Aug 82) 4

COLOMBIA

Briefs
Archipelago Television Station 5

COSTA RICA

Telecommunications Agreement Reached With ITU (LA NACION, 5 Aug 82) 6

EL SALVADOR

Antel Inaugurates Shortened Dialing System
(LA PRENSA GRAFICA, 21 Aug 82) 8

NEAR EAST AND NORTH AFRICA

AFGHANISTAN

Briefs

Daily Broadcasts To Refugees 10

ALGERIA

Tamanrasset and Batna Telecommunications Needs Discussed
(EL MOUDJAHID, 23-24 Jul 82) 11

Tamanrasset Telecommunications
Batna Phone Center

SAUDI ARABIA

Briefs

Telecommunications 15

SUB-SAHARAN AFRICA

SOUTH AFRICA

Briefs

New Radio Service 16

WEST EUROPE

INTERNATIONAL AFFAIRS

France, Luxembourg Debate Use of TV Satellite
(LE MONDE, 27 Jul 82) 17

Intergovernmental Conference 19-20 July, by Frederic Edelmann
European Cooperation, Constraints, Jacques Thibau Interview

Euronet Data Transmission Network Disappoints
(Patrick Coquide; LE NOUVEL ECONOMISTE, 28 Jun 82) ... 21

FEDERAL REPUBLIC OF GERMANY

Briefs

Digital Telephone Exchange 23

FRANCE

Briefs

Telecommunications Decentralization 24
Regional Fiber Optics Cables 24
Underwater Fiber Optics Communications 24
Biarritz Fiber Optics Network 25
Thomson CSF in India 25
SAT Contract With Thailand 25
Thomson-CSF-Tunisia Underwater Communications 25
Satellite Image Printer 26
Minicomputer Delays 26

ITALY

Optical Cable Network Between Mestre, Padova Described (G. Bonaventura, et. al.; NOTE RECENSIONI NOTIZIE, Apr-Jun 82) 27

NORWAY

Private Firm To Take Over Tromso Earth Station From Government (AFTENPOSTEN, 30 Aug 82) 39

SWEDEN

Head of L. M. Ericsson Views Company's Success, Future Trends (Johan Myrsten; SVENSKA DAGBLADET, 22 Aug 82) 41

BRIEFS

WIRE RADIO ASSISTANCE--The Ha Nam Ninh radio station has completed building for our Lao friends a wire radio station in Muong Sai City, Oudomsai Province, Laos. This is the first wire radio station ever built in this province. It has 100 sets of 750-watt output and a 32-km long wire network. Workers and cadres of the Ha Nam Ninh radio station, while doing the survey and building the wire station, have also helped with the training of Lao technical workers and editorial personnel to ensure the smooth operation of the station. They have been awarded the friendship medal by the LPRP Government. [BK070345 Hanoi Domestic Service in Vietnamese 2300 GMT 4 Sep 82 BK]

CSO: 5500/5917

BRIEFS

GUANGDONG BUYS TELECOMMUNICATIONS SYSTEM--China on September 7 signed a 10 million pound (US$17 million) contract with the British company Cable and Wireless to help construct a microwave telecommunications system covering the entire Guangdong Province in China. Beginning in 1984, the new network will link Guangzhou, the capital, with the oil prospecting centres on the island of Hainan to the west, and in 1985, with Shantou, a principal economic zone in the eastern sector. It will also service cities located in between the two furthest sectors. The system will be capable of simultaneously transmitting 960 telephone conversations and a colour television program. By linking it to the microwave line now under construction between Guangzhou and Hong Kong, the network will connect cities in Guangdong with Hong Kong. The multimillion dollar contract was signed by Eric Sharp, managing director of Cable and Wireless, and Li Gingwan, administrative director of the Post and Telecommunications Bureau in Guangdong. [Text] [HK090157 Hong Kong TA KUNG PAO WEEKLY SUPPLEMENT in English 9-15 Sep 82 p 12]

CSO: 5500/4025

BRIEFS

SOUTHERN TELEVISION EXPANSION--The Radio and Television Administration Committee has approved the request of army color television Channel 7 to increase its coverage area in the southern border provinces. The station's transmission power at its relay station in Hat Yai will be increased by connecting two 10-kilowatt transmitters in parallel and boosting its antenna's emission power. [Bangkok Domestic Service in Thai 1300 GMT 14 Jul 82 BK]

TELECOMMUNICATIONS ACCORD WITH JAPAN--The Communications Authority of Thailand and Japan's Nippon Telegraph and Telephone Public Corporation have agreed to promote exchange of telecommunications technology. Under a memorandum signed recently, the two semigovernmental organizations, apart from exchange publications on telecommunications technology, will also exchange visits by their officials, hold seminars and conduct joint research on themes of mutual interest. The agreement is for 2 years, but it will be extended automatically unless either side notifies its wish to terminate the agreement. [BK100923 Bangkok Voice of Free Asia in English 1100 GMT 9 Jul 82 BK]

CSO: 5500/5917

THREE MORE SATELLITE DISHES WILL BOOST MEDIA COVERAGE

Hamilton THE ROYAL GAZETTE in English 20 Aug 82 p 3

[Text]

Plans by the local media to erect three more satellite dishes are expected to result in better international news coverage and more live television programmes.

The Development Applications Board has approved plans by The Royal Gazette Ltd. to erect a satellite dish on the roof of its building on Par-la-Ville Road, while the Bermuda Broadcasting Company, owner of ZBM and ZFB radio and television stations, has applied for planning permission to erect two satellite dishes in Prospect.

ZBM currently has one satellite dish, which transmits AP Radio News and and the Independent Network News.

Mr. Keith Jensen, General Manager of The Royal Gazette Ltd., said the newspaper's satellite dish, expected to cost $20,000, would be erected within three months.

Explaining why the company is purchasing the dish, he said: "It will give us the opportunity to improve our services. It will give us the facility for high speed wire services at a reasonable cost."

"It will," he went on, "provide us with more immediate news coverage of international events and has the potential for a vast amount of choice."

He added that regular features, such as Ann Landers, which are now received in the mail could potentially come through the satellite.

Currently, international news from Reuters and United Press International is received by cable. The erection of the satellite dish with its ability to transmit news quickly and more cheaply will eliminate the need for obtaining news by cable.

But for the time being the newspaper would continue to use the cable transmission as a back up and for the use of a wire service that provides information about Caribbean sporting events, such as cricket.

If the Bermuda Broadcasting Company receives Planning Department permission to install its dishes, Bermudians can in the future expect to tune into ABC and CBS television programmes at the same time or merely hours after they appear in the United States — a big improvement over the currrent one week's delay.

According to Mr. Gladwyn Doars, chief engineer at ZBM, the station's satellite is locked into one position to keep track of AP and Independent Network news.

One of the proposed satellites is expected to take over the function of the present satellite, which will then be unlocked and allowed to revolve to give it the flexibility to pick up live events.

The third satellite will be used for the transmission of ABC and CBS television programmes, but Mr. Doars stressed that the company is merely preparing itself for that eventuality.

CBS and ABC are not available on satellite at present, he said.

CSO: 5500/7564

BRIEFS

ARCHIPELAGO TELEVISION STATION--Beginning on 7 September, the inhabitants of San Andres and Providencia Islands will have two TV networks. On one of them the programs that are seen on the continent will be broadcast, and on the other a selection of the best programs of the second continental network will be shown. Gustavo Castro Caycedo, director of the National Institute of Radio and TV (Inravision) said that this was decided upon on the basis of an opinion survey of the majority of the inhabitants of the islands conducted by means of interviews, telephone and mail. Previously, programs were specially edited in Bogota and sent by air to the Simon Bolivar Station in San Andres. Later it was decided that the entire programs of the first network would be sent. Now, under the new administration, a system has been devised which, without increasing the expenses, will give the TV viewers two choices. Equipment not being used has been put into condition to provide this new service. This will result in a greater degree of integration of the islanders with their fellow countrymen. A similar opening survey procedure has been launched in Leticia, capital of Amazonas. [Text] [Bogota EL TIEMPO in Spanish 23 Aug 82 p 7-A] 9204

CSO: 5500/233

TELECOMMUNICATIONS AGREEMENT REACHED WITH ITU

San Jose LA NACION in Spanish 5 Aug 82 p 29 A

[Text] The International Telecommunications Union, ITU, will provide Costa Rica with technical assistance to enable it to maintain sovereign control over radio broadcasting and prevent the penetration of transmission from neighboring nations.

The agreement was reached during the negotiations in Costa Rica between Richard Buttler, deputy secretary general of ITU, and journalist Armando Vargas Araya, minister counselor for information.

To begin the work, the UN will send Carlos Romero Sangines, one of the best known consultants in America and director of telecommunications of Peru.

Romero will visit the northern area in order to study and technically evaluate the penetration of radio and TV broadcasts from Nicaragua.

At the same time a high level Costa Rican committee will be formed consisting of experts from the Telecommunications Directorate of the Costa Rican Electrical Institute, ICE, and of the Secretariat of Information of the Government of the Republic.

This group will assemble the information which will provide the basis for the work which Romero will do later.

When the study is completed, the government will have talks with friendly nations to obtain the necessary resources to carry out the recommendations made by the experts.

As a preliminary step, a working meeting was held by experts of the Secretariat of Information and of ICE including David Peralta, Armando Acuna, Marco Tulio Delgado, Nestor Calderon and Teofilo de la Torre, executive president of that institution.

SINART

Part of the project is an agreement for technical collaboration between ICE and the National Cultural Radio TV System, SINART.

They plan, through the use of repeaters, to extend the radius of action of the Radio Nacional and Channel 13 signals. In principle, it was agreed that ICE will do the broadcasting and will be in charge of all technical aspects of transmission.

This will allow SINART to be free of all technical matters and to concentrate on the production of messages sent over the state media.

The Information and Communications Council of the government will probably study the report on the agreement between ICE and ITU in order to solve the problems of radio broadcasting sovereignty.

Next year a meeting called by ITU will be held in Mexico to analyze signal interference between nations.

The participants of this meeting will be primarily from the Caribbean countries, and an effort will be made to arrive at a definite solution for the problems of this type of interference.

9204
CSO: 5500/2327

ANTEL INAUGURATES SHORTENED DIALING SYSTEM

San Salvador LA PRENSA GRAFICA in Spanish 21 Aug 82 pp 5, 11

[Text] The First Digital Telephone Exchange with Shortened Dialing System, the first in Central America, was entered into service yesterday by Dr Alvaro Magana, president of the Republic.

Col Nicolas Carranza Jr, president of the National Telecommunications Administration, ANTEL, said yesterday at the inauguration that "Centro III", as it is called technically, is the greatest advance in telephone commutation technology since 1966. It has 6,144 lines of subscribers which in its initial stage can be increased to a maximum of 30,000 lines as things stand at present.

He then said that it will also function in "a tandem arrangement and as a central exchange."

He said that this will be the case for the remote units in Atlacatl, Soyapango, Ciudad Arce, Zacatecoluca and the America settlement which will be installed soon.

He said that this type of telephone exchange will offer the telephone subscribers a number of special services which are only possible with this technology.

Digital Dialing

The "Shortened Dialing" service, he said, allows the subscriber to call another subscriber by dialing only one or two digits. The subscriber can choose the numbers which he calls most frequently and set them in and replace or eliminate them at will on the shortened dialing list from his own telephone. Col Carranza Jr. explained that the numbers on the list may be local, domestic or foreign. The subscriber can have a minimum of five numbers which can be increased, in increments of five, up to a total of 100 numbers.

He added that the "call transfer" service allows the subscriber to transfer incoming calls automatically to another number in the city. For example, if a businessman has a telephone number in his office and is expecting a business call, when he leaves for home he can program the business telephone so that the calls that he is expecting at that telephone, instead of being received there, will be received on his private telephone or vice versa.

The ANTEL president said that in addition to the previously me6ntioned services, the new system provides hold calls, conference calls and direct line calls.

Finally, he added, for any country aspiring to progress, the development of a modern telecommunications system is of undeniable importance in stimulating productive sources. He ended by thanking all the former officials of ANTEL who initiated this project.

9204
CSO: 5500/2334

BRIEFS

DAILY BROADCASTS TO REFUGEES--New Delhi, 29 Aug (AFP)--The Soviet-backed Afghan Government has begun a 2-hour daily broadcast over the state-controlled radio to try to coax back an estimated 4 million Afghan refugees who feld the country after Moscow's armed intervention in December 1979. The broadcast, which began Friday with the Muslim holy prayers, is specially aimed at Afghanistan's eastern neighbour, Pakistan, which has given shelter to more than 2.7 million refugees, said Indian broadcasters who monitor Afghan radio. The broadcast can also be heard clearly in Iran, which has a large number of Afghan refugees, and India. "The broadcasts for Afghans abroad will explain the lofty aim of the Sawr (April 1978) revoluiton and disclose the atrocities of the agents of imperialism and plots concocted by them at the instance of their masters," Kabul radio said last night in formally announcing the broadcast. The broadcast is seen by diplomatic analysts here as part of a Moscow-engineered campaign towin back the refugees, who have drawn international attention and have been aiding Muslim insurgents fighting the government of President Babrak Karmal. [By Dilip Ganguly] [Excerpt] [BK290935 Hong Kong AFP in English 0906 GMT 29 Aug 82]

CSO: 5500/5350

ALGERIA

TAMANRASSET AND BATNA TELECOMMUNICATIONS NEEDS DISCUSSED

Tamanrasset Telecommunications

Algiers EL MOUDJAHID in French 23-24 Jul 82 p 4

[Excerpts]

A Space Telecommunications Center

Since 1976 Tamanrasset has known a real communications boom owing to installation of the most modern communications equipment.

Before then, the wilaya was linked by radio; but today, thanks to ground stations, it benefits not only from telephone and telex facilities, but also from radio and televised news distributed by RTA [Algerian Radio and Television].

The Tamanrasset space radio and telecommunications center permits operation of 16 telephone and telex circuits, which can be extended to 32.

In January 1982, two long lines were made available to subscribers. These lines link the internal net of the wilaya's chief town to the integral automatic system.

In addition, specialized circuits link Tamanrasset to the daira of In-Salah and to the Ouargla center. These latter serve as relays, and because they are linked to the integral automatic system, they permit fluidity of traffic routing at times of peak load.

For telegraphic connections, Tamanrasset wilaya is now equipped with three harmonized beams of 24 telex channels; thus each of them can meet the needs of 72 subscribers.

At In-Salah as at Tamanrasset, the ever-growing demand for that mode of communication has necessitated installation of a third harmonized beam, which is in process of completion.

Ten isolated localities have been linked by radio and air transport to Tamanrasset. They include In-Guezzam, Tmiaouine, Tin-Zaouatine, Silet, Abalessa, Idless, Tazrouk, Amguid, and In-Amguel. The latter two links are not yet operational. Zaouia is linked to In-Salah by air service, and a link with El-Barka is in process of completion.

Telephone: 1,400 Subscribers

Telephone usage by localities in the Tamanrasset area is faced by the problem of non-availability of electricity, so much so that service functions for 3-hour periods by means of small generators.

Under a special southern area program it has been decided to install six ground stations intended to serve the border localities of In-Guezzam, Timiaouine, Tin-Zaouatine, and Abalessa to the west, and Idless and Tazrouk to the east of Tamanrasset.

Once completed, those stations will not fail to give satisfaction to the inhabitants of those localities through their television and radio broadcasts. The wilaya will then be almost completely covered by audiovisual as well as telephone, telex, and telegraphic facilities.

Also programmed is a link with In-Salah by hertzian beam, which will bring the daira of Tamanrasset into the integral automatic net, so that it will finally emerge completely from its isolation.

Those satellite circuits (radio and hertzian beams) will permit service to some 1,400 subscribers throughout the wilaya.

The Tamanrasset central has a capacity of 1,000 lines and is operating at 90 percent of full load. It cannot at present be expanded because of the small size of its premises.

Under the five-year plan a central to handle 10,000 lines is envisaged to meet the needs of the capital of the Hoggar, of which nearly 400 service requests are being acted on. As for In-Salah, it has a 500-line exchange now operating at 95 percent of capacity; it is planned to expand it to 1,000 lines.

Those exchanges, and particularly that at Tamanrasset, are faced with a human problem: the very transient character of personnel in positions as inter operators. In other services such as accounting, telegraphy, and subscriber services, personnel is more homogeneous and stable, for the simple reason that employees assigned to such posts are for the most part from the region, and all have had the advantage of training in other wilaya administrations in the northern part of the country.

With regard to upper level personnel and supervisors, conferences and competitions for access to that group have been organized, and have made it possible for 11 employees from Tamanrasset to take training at the Oran Technological Institute. They will take up their duties next September.

The very decrepit network of lines was installed in 1969 to serve 35 subscribers. Today, with 1.700 subscriber lines, it operates at 95 percent of capacity.

Personnel Turnover

That problem of saturation is almost solved for In-Salah, where conduits are completed. All that remains to be done is permutation and extension of those lines in underground cables.

At Tamanrasset, conduits are 50 percent completed, and new networks, when completed, will put an end to the very frequent problem of malfunctions in subscriber lines.

In addition, phone systems for the localities of In-Ghar and Foggaret Ezzoua (In-Salah) as well as In-Guezzam and Abalessa (Tamanrasset) are under study. In those distant localities demand for service is at its strongest, and connecting those new subscribers is most urgent and necessary. Line service is experiencing a lack of human resources which is an acute problem. Personnel trained as linesmen by the Posts and Telegraphs is very quickly absorbed by other firms. Their leaving is due to several factors, including pay. Nevertheless, the majority of that service personnel was replaced in October 1981.

Maintenance of equipment at telephone exchanges, including radio centers, ground stations, and hertzian beams, is controlled from day to day by technicians at the wilaya centers.

The operations management of Ouargla telecommunications center, for its part, conducts every two to three months a complete maintenance cycle for all equipment at transmission and switching centers and emergency power stations. In addition, in April 1982, 10 lines storage sheds were acquired. One was fitted out as a lecture hall for continuous training, in their native tongue, of Posts and Telegraphs employees from Tamanrasset. Organization of all materiel for lines and installations, as well as construction and transportation services, was taken up within the other sheds.

Formerly, all such materiel was exposed to the open air, or stored in a courtyard equipped as a depot within the management premises. The same type of sheds is planned for In-Salah. A consumers' cooperative and cafeteria were opened to Posts and Telegraphs employees in 1980. In addition, a social center is under construction and soon to be accepted. That complex, with a capacity of 50 beds, will include a club room, infirmary, library, and kitchen. A social services committee has been elected.

Each year, vacation centers are organized for children of all workers in the wilaya. They are sent to one of the three Posts and Telegraphs vacation centers at Les Andalouses, Meftah, or Dellys.

Batna Phone Center

Algiers EL MOUDJAHID in French 23-24 Jul 82 p 4

/Excerpts/ Batna daira presently records 5,000 phone service requests which cannot be met. The 5,000-line exchange is operating at full capacity. Subscribers must be very patient, especially during periods of peak demand, to communicate with Annaba or Constantine.

Opening of a second exchange with a capacity of 10,000 lines is planned for the second quarter of 1983, and will momentarily solve the telecommunications problem, but even now, with the constant growth of the city of Batna, it is time for the posts and telegraphs administration to think of building a 20,000-line exchange, which would iron out all difficulties experienced in this field.

The telegraphic center is also operating at full capacity. To meet the ever-growing needs of state corporations, offices, and enterprises, and to palliate the most urgent, the wilaya posts and telegraphs administration has had to route a few subscribers through Constantine. In accordance with the 5-year plan, 100 additional lines will be operational by the first quarter of 1983.

Other dairas in the wilaya, all of which are linked to the national network, are experiencing a problem identical with that of Batna. Telephone exchanges in operation find it very difficult to meet a constantly growing demand.

To palliate the shortcomings of the existing telecommunications infrastructure, the posts and telegraphs administration has benefited from inclusion of many operations in the 5-year plan. Thus the Ain-Touta telephone exchange, with a present capacity of 500 lines, will be expanded to 1,000 in an initial phase, and will reach a 2,000-line capacity by the end of the 5-year plan.

The Barika exchange will be expanded initially to the same extent as that of Ain-Touta. Construction of a second exchange in the city of Hodna is a necessity in view of the steadily growing importance of that city, which lies at the convergence of four wilayas (Batna, Bisra, M'sila, and Setif). The telephone exchange at Kais, with a present capacity of 500 lines, will be extended to 1,000 by next August. Those at N'Gaous, Merouana, and Arris will be expanded during the 5-year plan, which also provides for equipping the communes of Timgad (Batna daira), Menaa (Arris daira), and Tazoult (Batna daira) with 500-line telephone exchanges.

All those projects will be complemented by facilities to link important dairas and communes of the wilaya to the national network. To break the isolation of remote populations in the wilaya, it is planned to connect 95 localities, resettlements, and centers, in order to put the telephone within reach of all citizens. The posts and telegraphs administration has made a remarkable effort by installing many public booths to insure the success of this operation. Certain citizens are to take charge of those facilities.

6145
CSO:5500/5013

BRIEFS

TELECOMMUNICATIONS--Riyadh, 26 Aug (OPECNA)--Saudi Arabia has agreed in principle to participate in an international telecommunications project linking the Middle East, Europe and the Far East by an intercontinental submerged cable system. Zuhayr Musallam, director general at the Saudi Ministry of Post, Telephone and Telegraph, said the system would provide telephone and telex services to at least 50 countries in the three regions. He said a draft agreement on the construction, operation and maintenance of the project would be finalized shortly. At a recent meeting here between Saudi Arabia, Singapore, [words indistinct] Sri Lanka, Djibouti, Egypt and Italy to participate in the project, since these countries could provide landing points for the network. [Text] [LD081304 Vienna OPENCNA in English 1920 GMT 26 Aug 82]

CSO: 5500/4735

SOUTH AFRICA

BRIEFS

NEW RADIO SERVICE--The South African Broadcasting Corporation [SABC] will introduce its ninth radio service in the language of one of the country's black communities on 1 April next year. A commercial service, including news bulletins, known as Radio Ndebele, will be broadcast mainly to the 380,000 members of the south Ndebele community for three hours daily from the FM transmitters in Nylstroom in the Transvaal. The service will be extended when the necessary facilities become available. The SABC also broadcasts internal English and Afrikaans programs, national and regional commercial services, as well as Radio RSA on shortwaves. The corporation has announced that it has given the South West Africa Broadcasting Corporation nearly 6.5 million dollars to improve the radio services in the territory. [Text] [LD101035 Johannesburg International Service in English 1500 GMT 9 Sep 82]

CSO: 5500/5912

FRANCE, LUXEMBOURG DEBATE USE OF TV SATELLITE

Intergovernmental Conference 19-20 July

Paris LE MONDE in French 27 Jul 82 pp 1, 19

[Article by Frederic Edeimann: "Toward a European Truce?"; first of two related articles by same author published under general heading "Battle of the Television Satellites"]

> [Text] After a phase of hard-core talks on European television satellites, marked notably by the set positions of the French government and the threats of the Luxembourg government to release the frequency available on a satellite of its own to an American group, the statements made to us by Mr Jacques Thibau [see second article] indicate that the time has come to negotiate.

On 19 and 20 July, in Paris, at the initiative of the French government, an intergovernmental conference was convened to "open the way for a cooperative European audiovisual space."

The debates, in which--besides France--the FRG, Austria, Belgium, Luxembourg and the Netherlands all took part, centered on the issue of television satellites. According to Mr Thibau, former deputy director of French television, a member of the Moinot Commission, and now, since December, entrusted by the prime minister with heading the French negotiations on television satellites, the outcome of this conference was the shaping of a start toward genuine European cooperation.

Without prejudging the future results of these negotiations, one can only hope for and urge a degree of clarification of policies and decisions relating to these satellites.

From a practical, that is, a technical, standpoint, plans are proceeding on course. Mr Jean-Pierre Chevenement, minister of research and industry, and his West German counterpart, Mr Andreas von Bulow, have just approved the contract providing for the construction, by a Franco-German group, and the launching, in 1985, of the first French TV satellite, TDF 1, and of the first German one, TV-SAT; two other similar, 3-channel satellites are to be launched soon thereafter.

From the theoretical standpoint, that is, the political, commercial and cultural, things are less simple. Before the results of the 19-20 July conference were known, a fortiori BR [as published] those of the fall conference, Mr Georges Fillioud, minister of communications, had advanced as the "most realistic hypothesis" the creation of a "commercial channel" (a public-sector channel, he specified, with possible concessions later), financed by advertising and, of course, transmitted by satellite.

In pitting this plan, in a way, against other "unscrupulous" plans, he drew a response from Luxembourg's Prime Minister Pierre Werner, who saw in these words an attack against his country's plans and those of the CLT [Luxembourg Television Broadcasting Company].

To be perfectly frank, as long as Great Britain or Switzerland, both of whom also have "offensive" plans from a commercial standpoint, are not in a hurry to negotiate what they already own, Luxembourg is in a fortunate position vis-a-vis France, an interested partner, through the Havas Agency, in the CLT.

When under the previous French government the CLT tried to obtain the concession on the third channel of the French satellite, preference was accorded to a MATRA [Mechanics, Aviation and Traction Company]-Europe 1-Hachette channel of our own. Having since then decided to launch its own satellite, the CLT has encountered hesitancies on the part of one of its principal stockholders--France. As of now, a truce seems to be taking shape.

European Cooperation, Constraints

Paris LE MONDE in French 27 Jul 82 p 19

[Interview with Jacques Thibau, former deputy director of French television, now conducting French inter-European TV satellite talks, by Frederic Edelmann: "A True European Audiovisual Space Must Be Created"; second of two related articles published under general heading "Battle of the Television Satellites"]

[Text] "In August 1981," Mr Thibau said to us, "the government received a very urgent request from Luxembourg and the CLT [Luxembourg Television Broadcasting Company], who wanted a green light from France for their satellite project. It was a very ambitious project. It had been drawn up based on an American study urging Luxembourg to adopt a violently offensive strategy with the aim of being the first to reach the market and to occupy the terrain. It threatened to punch a big hole in the advertising market.

"France reacted swiftly. In November, it indicated to the government of Luxembourg that it was not prepared to accept anything whatever, but much less a project that posed a threat to the internal balance of the media in France and that would make a mockery of France's cultural policy as a whole.

"Luxembourg, for its part, became more and more aware of the difficulties and financial risks involved in its program. And above all--it is evident now--it became clear that such a satellite would immediately touch off a fantastic commercial war in Europe. Luxembourg's error was to think it could, with an accommodating neutrality on the part of France, undertake a conquest of the advertising markets without incurring a reaction. The Luxembourgers are now deeply disillusioned. But while they place the entire blame on our shoulders, they fully realize at the same time that we are not their sole obstacle."

[Question] Luxembourg was your most immediate concern, but your mission was much more vast.

[Answer] We had to see how the other Europeans view the satellite question. Talks have commenced. Essentially, with the Germans, since here, as in other domains, a broad cooperative effort cannot be mounted without a basic Franco-German agreement. The Germans were split. There were those who felt that it was all hardly worthwhile--this was the case of Willy Brandt and of Helmut Schmidt--and that everything that is technically possible is not necessarily humanly desirable. Why create new programs, they ask themselves, when we have all we can do to manage those we already have. On the other hand, I have found, in Germany as elsewhere, those devoted to modernity, to technology, those who believe in the importance of these to industry and commerce.

Thus, during the negotiations, I encountered two attitudes: The view that there is not much we can do, that the new technologies are in any case going to overrun Europe; but also the conviction that a commercial war to the death among all these satellite projects must be prevented. Between France and Germany, at least, it has become clear that it was a mistake to launch the common satellite program without having priorly concerned ourselves with its eventual impact on the various media as a whole and on their closely allied domains.

The attitude of fear and skepticism among the Europeans evolved at the same time that the Luxembourgers were gaining an understanding of the limitations of their plan. They all came to recognize that the problems must be examined together. For, the same deep-rooted problems with respect to the audiovisual sphere, the same lack of coherence, the same financial difficulties, are being encountered everywhere. At this point, none of these countries, whatever it may desire or do, is in a position of being able to adopt a protectionist attitude, and most of them are therefore prepared to "let the information circulate." To preserve contradistinctions of national production--whether it be in the audiovisual domain or that of the cinema or the press--to fortify their specificity, their "cultural identity" as some like to call it, the countries must address the problem together. To share this view of things is already a considerable forward stride. It remains to be seen who will decide: The European institutions, the governments or even the television organizations, since the latter are very independent in certain countries. In any case, everyone shares the very clear view that procedures must be set up to cooperate and create a true "European audiovisual space," lacking which, each will eventually find himself short-allowanced.

[Question] These "views," these "convictions"--do they really have a future?

[Answer] The French government has taken an initiative the importance or non-importance of which remains yet to be seen, but it remains the only initiative that has been taken in a long time toward a cooperative effort in this domain. We have at least succeeded in interlocking these views and convictions into an approach, in "constraining"--if I may use the term--neighboring countries to take the approach of a "European audiovisual space."

For there to be progress in a European cooperative approach, there must be constraints. These constraints exist: The lack of a clear financial outlook on the part of the national television organizations and institutions, on the one hand; and, on the other hand, the threat of these satellites, which, in tapping our advertising, will, as they say, be "stealing our money." Regardless of how skeptical people may be, they become much more cooperative as soon as they fear for their material resources. What we created on 20 July was a sort of de facto committee to come to an agreement on what decisions are to be taken. On the satellite issue, of course, but also with respect to traditional microwave systems.

[Question] Does your mission not overlap that of the Ministry of Communications? Is there a possibility of your finding yourself in disagreement with Mr Fillioud?

[Answer] My mission has been to carry on preliminary negotiations. It is now to pursue these talks for the Ministry of External Relations. There is no overlapping with the functions of the Ministry of Communications, which is charged with the putting in place of projects. Eventually, there may be some problems between certain French projects and the outcome of these European negotiations; it will in that case be necessary that France abide by that outcome, since it was France that took the initiative. If within a European framework we settle on rules for the channeling of advertising to others, our commercial television network plan will have to conform to these rules.

[Question] Are all the countries prepared to conform to this approach? It seems that Luxembourg is; but there is Great Britain, whose plan also appears to be very aggressive.

[Answer] Great Britain's strategy is indeed very offensive and at the same time very protectionist. But Great Britain will be invited to the fall conference and will probably attend. A determination has yet to be made as to which countries intend to play the game on their own and which of them intend to cooperate. This is what will tell us whether the negotiation has been a success or a failure. If we do not reach concrete results, each country will have to pick up its marbles and play a lone game, following its own strategy. Even if it entails coming back to the negotiating table some months or years later to try to restore some kind of order, a relatively acceptable system.

9399
CSO: 5500/2329

EURONET DATA TRANSMISSION NETWORK DISAPPOINTS

Paris LE NOUVEL ECONOMISTE in French 28 Jun 82 p 46

[Article by Patrick Coquide: "Euronet's Slow Start"]

[Text] European data-processing is as difficult to achieve as European politics. Thirteen years after the initial research and 2 years after it was open to the public, Euronet Diane, the European network for the transmission of computerized data, is far from the success expected by its creators. Out of a potential number of 1 million users (for 260 million EEC residents), only 3,000 have subscribed. The services proposed by Euronet are far from negligible, however: for less than 50 francs a month, and provided one owns a computer terminal, the linkup with the network makes it possible to access 1400 data banks and 1600 data bases, both European and international (a base provides bibliographic references and succinct descriptions. A bank supplies complete texts or information.) In all, more than 60 million economic, legal and scientific reference and information items are thus available.

That impressive but underutilized tool came out of a wish on the part of the [European] community's leaders to establish a specific network among the EEC's member nations for the dissemination of computerized data, and out of a wish to prove--according to a former high official in Brussels--that they were capable of achieving a common task in a less "sensitive" area than agriculture or the common budget.

Undertaken as early as 1969, the network's setup was used, from 1975 on, by European institutions only, then, in February 1980, became available to all citizens of member nations. Other European countries, not members of EEC, are supposed to join the "Euronet Club" between now and 1985. This includes Austria, Sweden, Switzerland and Finland. In the case of Spain and Portugal, their joining the Common Market would, in fact, entail their connection to the network.

This technical and political success does, however, conceal a dual "counter-performance." Actually, only the chief national agencies and the major companies are connected with Euronet, although one of the initial purposes was to provide access to data banks for the widest possible audience, such as PME [Small and Medium-Sized Businesses], the professions and university faculties. The truly weak link, however, in the European network remains its dependency on...the United States. More than 70 percent of the information distributed by Euronet-Diane originates in the United States. Across the Atlantic, paradoxically, there are only seven centers to serve data banks and data bases, compared to 36 in Europe. To regain ground, therefore, the Europeans need to reorganize their capabilities. At least, this is the opinion of Mr Andre Mauperon, advisor to the general directorate of data-processing for the Communities in Brussels: "National governments should no longer encourage the development of serving centers for simple reasons of strategy and prestige." In data-processing too, being European will have to take precedence over being French or German.

11936
CSO: 5500/2310

BRIEFS

DIGITAL TELEPHONE EXCHANGE--In Hamburg and Stade the Federal German Postal Service (DBP) has put into operation its first two digital telephone exchanges. Both will handle telephone traffic in the long-distance network, the exchange in Hamburg has been expanded for 3,800 trunk lines, the one in Stade for 800. They were delivered by Siemens through a DBP bid process. SEL [Lorenz Standard Electric] built additional digital exchanges for telephone traffic in Stuttgart and Heilbronn. These facilities are presently being tested by the DBP. The digital exchanges are part of a new generation of telephone exchange facilities which will be introduced on an accelerated basis in the next few years. Speech is converted at the entrance of the exchange into digital signals, conducted in this form through the "coupling network," and at the exit converted back into the original form. This provides the prerequisite for a future universal digital network which, in addition to telephone calls, can also transmit telecommunication services such as data services or fast remote copying. [Text] [Duesseldorf VDI NACHRICHTEN in German 18 Jun 82 p 1] 12124

CSO: 5500/2325

FRANCE

BRIEFS

TELECOMMUNICATIONS DECENTRALIZATION--The DTRN [Directorate of National Network Telecommunications] has now completed its move to its definitive premises at Toulouse, under a continuation of the policy of decentralizing services headquarters to outlying provinces. In his speech inaugurating the premises, Louis Mexandeau, minister of PTT, reviewed the role of the DTRN in the telecommunications domain, adding that "it is due to take on additional functions in the field of switching by virtue of which it will operate certain interurban transit traffic centers." Referring to the existence of a "unified, unitary but not an only National Network" (this network, in fact, consists of the telephone, telex and data transmission networks), the minister underscored the DTRN's dedication to its development "with the aim of providing the country with the new services it needs, whether these be in the domains of telephony, data processing, telematics, and "videomatique" [videotex]. [Text] [Paris REVUE FRANCAISE DES TELECOMMUNICATIONS in French Jul 82 p 8] 9238

REGIONAL FIBER OPTICS CABLES--The first contract for the furnishing of fiber optics cables to meet the needs of the regional telecommunications services has been awarded to LTT [Telephone and Telegraph Services. This will enable the installation, during the first half of 1983, of 13 regional trunking arteries totaling 60 km of cables and 1932 km of fibers. Two regions (Paris and Montpellier) will lay and interconnect their own cables. These cables will eventually be equipped with systems for the transmission of data at a speed of 34 Mbits/sec over optical fibers. Two other sectionalized contracts will be awarded this year by PTT under its 1982 program: 51 arteries representing 285 km of cables and 5,200 km of fibers. [Text] [Paris REVUE FRANCAISE DES TELECOMMUNICATIONS in French Jul 82 p 9] 9238

UNDERWATER FIBER OPTICS COMMUNICATIONS--The first phase of the national underwater fiber optics communications program will be signalized in September by the laying of a 20-km, repeaterless link between Juan-les-Pins and Cagnes-sur-Mer. The second phase will be an experimental link between Antibes and Grimaud (78 km). The equipment is being manufactured by CIT [International Telephone Company] and Cables de Lyon. The cable will consist of four monomode fibers with a regenerative-repeater spacing of 25 km; it will link two 280-Mbit/sec systems, thus making available, in 1983, close to 8,000 telephone channels. This program is to be completed in 1985 with the opening of a commercial link between the continent and Corsica. [Text] [Paris REVUE FRANCAISE DES TELECOMMUNICATIONS in French Jul 82 p 9] 9238

BIARRITZ FIBER OPTICS NETWORK--In June, the first fiber optics cables were laid at Biarritz: Two 70-fiber, 1,000-meter cables without splices, between the Lycee Exchange and distributing terminals located in the center of the city (SAT [Telecommunications Corporation] and SILEC [Industrial Company for Electrical Links] one 70-fiber, 2,280-meter cable without splices over the route secured by the link (LTT) between the railroad station exchange and the Rue Kennedy exchange. During the same month, a model of the future videophone, just as it will be installed on the premises of 1,500 subscribers around mid-1983, was exhibited. The services this videophone system will be able to offer were also spelled out. Access to data banks and image banks, reception of national and international television programs, and possibly local ones. [Text] [Paris REVUE FRANCAISE DES TELECOMMUNICATIONS in French Jul 82 pp 9-10] 9238

THOMSON CSF IN INDIA--Pursuant to an international request for bids launched in March 1981, Thomson-CSF Telephone has been awarded a contract by the Indian PTT for the furnishing of 18 Type P40 private-line telephone exchanges, representing 14,000 telephone lines. [Text] [Paris REVUE FRANCAISE DES TELECOMMUNICATIONS in French Jul 82 p 11] 9238

SAT CONTRACT WITH THAILAND--The SAT [Telecommunications Corporation] has just been awarded a contract by the EGAT [Electric Power Production Administration of Thailand] to furnish and install a Telcom 320 automatic switcher. This contract valued at 3.4 million French francs, was won in an international competitive bidding contest against Western Electric and NEC [Nippon Electric Company],although financing is to be provided by the Bank of Japan. The switcher is scheduled to go into service at the end of this year. This automatic switcher, the capacity of which is 3,000 lines, will be the hubbing point of the EGAT network, which extends throughout Thailand. The new Telcom 320 equipment, a PABX version of the TC 300 public exchange, was exhibited for the first time at an international show. [Text] [Paris REVUE FRANCAISE DES TELECOMMUNICATIONS in French May 82 p 12] 9238

THOMSON-CSF-TUNISIA UNDERWATER COMMUNICATIONS--Tunisia has just ordered from CIT-ALCATEL [International Telephone Company-Alsatian Company for Atomic, Telecommunications and Electronic Construction] and from Cables de Lyon, two companies belonging to the CGE [General Electric Company] group, the furnishing of an underwater telephone link between Bizerte and Martigues. The contract sum is 200 million French francs. Planned capacity: 2,850 circuits. Start of service is scheduled for the end of 1983. Two underwater telephone cables already link Tunisia and France, as is known, with a total capacity of 768 circuits. The Ministry of Transport and Communications of the Republic of Tunisia has just awarded the French group headed by CIT-ALCATEL and comprising Cables de Lyon and the SAT [Telecommunications Corporation] and TRT [Radio and Telephone Telecommunications Company] companies contracts for the completion of several sections of the new long-distance digital network that is to link the principal Tunisian cities located in the regions of Tunis, Sousse and Sfax. The overall total of the order placed with the French consortium comes to 75 million French francs. Upon completion of this order, Tunisia, which is already equipped with CIT-ALCATEL Type E 10 time-division telephone exchanges, will then have an integrated digital network, enabling the introduction of new telematics services. [Text] [Paris REVUE FRANCAISE DES TELECOMMUNICATIONS in French Jul 82 p 12] 9238

SATELLITE IMAGE PRINTER--At the Unispace 82 show being held in Vienna from 9 to 21 August, Agfa-Gevaert Belgique and the ESA [European Space Agency] are exhibiting jointly an experimental satellite electronic image printer, operating between Noorwijk (Netherlands) and the Austrian capital. The order to print is given via an image analyzer and transmitted to a telecommunications earth station. The signal, relayed by the OTS [Orbital Test Satellite] is received by the Viennese station, where an Officer P400 electronic printer reproduces the document that was analyzed at its origin by the Agfa-Gevaert IS 200. The latter reads an A4 document in 4 seconds with a separative power of 8 points per horizontal millimeter, and 7.7 points vertically. The grays are produced by electronic cross-hatching. The P400 uses a laser as an electro-optical writing element and operates at the same speed of 4 seconds for the printing of an A4 page (separative power of 16 points per horizontal millimeter and 15.4 points vertically). The P400 is also equipped with a multiple-character generator, enabling it to convert the instructions given by a computer or by a word processing equipment into a linear cross-hatched signal of high separative power. [Text] [Paris ZERO UN INFORMATIQUE HEBDO in French 23 Aug 82 p 11] 9238

MINICOMPUTER DELAYS--The development of French programs adopted to microcomputers, one of the main cultural issues at stake in the eighties, has become, for the publishers involved, a "mirage," which they say portends a pure and simple "failure" that leaves the door wide open to American products. Three textbook publishers, Hachette, Nathan and Hatier, have just started an organization to promote awareness of the dangers of such a failure, which threatens data processing programs designed for teaching--this is 3 years after Operation "10,000 Microcomputers" was implemented in the high schools. They say that the situation today shows less progress than 2 years ago. In fact, according to the publishers, beside such major experimental works as Teletel in Velizy or the World Data-Processing Center in Paris, they feel that the real French market, partially paralyzed by state regulations, has become "more fragile and more permeable." However, one of the objectives sought in this area was "recapturing the French market and developing software adapted to our needs." On a technical level, the publishers are coming up against the disparity of materials and languages developed in France through public financing. They feel this absence of standardization will thus gradually result in choosing the only "common denominator" in existence: American standards...[Text] [Paris LES ECHOS in French 16 Jul 82 p 7] 11936

CSO: 5500/2310

OPTICAL CABLE NETWORK BETWEEN MESTRE, PADOVA DESCRIBED

Rome NOTE RECENSIONI NOTIZIE in Italian Apr-Jun 82 pp 57-63

[Article by G. Bonaventura of the ASST (State Telephone Services) and O. Cottatelucci and P. Rosa of the Higher Institute of PT (Posts and Telecommunications): "Mestre-Padova Interurban Optical Cable--Part 1: Characterization in the Factory"]

> [Text] Summary--The article describes first of all the general characteristics of the Mestre-Padova optical-cable installation, such as the layout, the structure of the cable, the type of fibers, etc. Next, the measurement methods used for characterization of the optical fibers during the acceptance tests in the factory are illustrated briefly. Finally, the results for the geometric, optical and transmissive characteristics of the fibers as observed in test pieces of cable are reported in the form of tables and diagrams.

1. Introduction

The technical characteristics of optical fibers and optical cables leave no doubts about suitable and extensive application of them in telecommunications networks (Bibliography 1). Furthermore, an economic advantage of multimodal optical fibers over the traditional coaxial pairs, 2.6/9.5 mm, for long-distance interurban connections is already obvious. The interest of managers of telecommunications networks in this new technique, both in Italy (Bibliography 2) and abroad, is therefore natural.

In 1980-1981, the ASST, together with the SIP [Italian Telephone Company], installed an optical-fiber cable connection among several urban and interurban exchanges of the Rome network. The cable, 16.38 km long, contains 18 multimodal optical fibers with index-of-refraction gradient profile, 14 of which have transmission characteristics (attenuation $\leqslant$ 4 dB/km and band width $\geqslant$ 700 MHz-km) which, at the time of ordering, represented the best that was available in industrial production. The research on the techniques of laying long pieces of cable in conduit, on splicing, on measurement of the characteristics of the fibers and, in general, on whatever is necessary for putting in an installation in an urban area has been carried on within the framework of this first installation.

On the basis of the favorable results achieved, the ASST then decided to go ahead with the laying of a first interurban cable between Mestre and Padova.

The purpose of the present article is to describe the characteristics of this cable and the results of the tests conducted in the factory. The aspects relating to the laying, the splicing and the characterization of the regeneration sections will be presented in a subsequent article.

2. Objectives and Plan of the Installation

The Mestre-Padova line was selected for the laying of the cable for several reasons. It constitutes a section of the Mestre-Verona-Milan-Turin line which, as regards national and international traffic requirements, is second only to the Milan-Rome line. In addition, the laying of a coaxial-pairs cable between Mestre and Padova had already been planned, and the same excavation could therefore be used, with considerable saving on installation costs. Finally, the length of the connection (32 km) proves appropriate for examination of the problems typical of interurban installations.

The layout of the cable and the various exchanges connected are indicated in Figure 1. The cable will be laid in conduit for about 3 km (in the urban areas of Padova and Mestre) and in a trench along the highway for the remainder of the distance. It is planned to use the cable essentially with 140-Mbit/s systems, some working at 850 nm and others at 1,300 nm; containers for the regeneration points have therefore been planned with a spacing of about 8 km. However, in order to take into account any eventual unfavorable laws of bandlength addition and of future systems with different regeneration pitch (if the WDM [expansion unknown] technique were to be adopted, for example), the installation has been prearranged in such a way as to be able to place the optical regerators also in containers for the 60-MHz systems of the coaxial-pairs cable, which are positioned every 1.55 km.

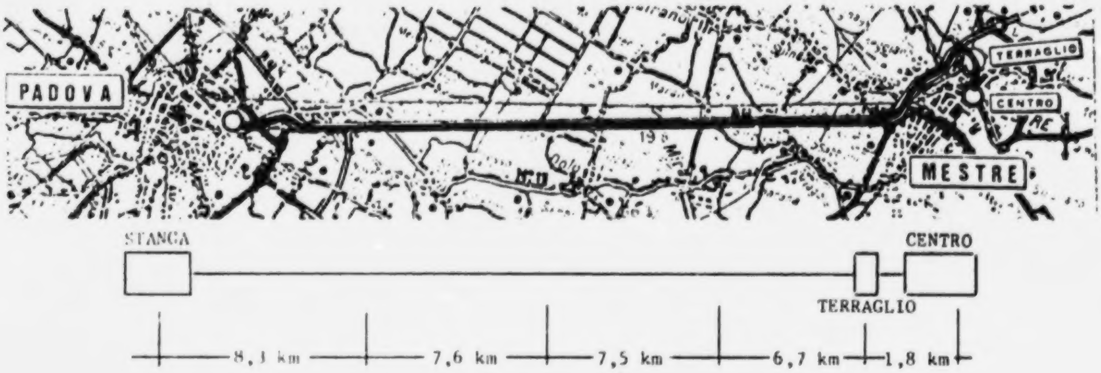


Figure 1--Layout of cable

Among the principal purposes fixed for the Mestre-Padova cable, we can mention those of providing an initial solution to the typical problems of interurban installations, such as protection for trench-laying, remote power-supply and remote monitoring of the intermediate regenerators, as well as initiating experience with fibers and systems operating around 1,300 nm.

3. Cable and Optical Fibers

The optical fibers used are of the multimode type with gradual-progression refraction index and were supplied by Corning Glass Works. The nominal dimensions of the fibers--core 50 μm and shell 125 μm--are as recommended by the **ITTCC** [International Telephone and Telegraph Consultative Committee] (Recommendation G.651, Vol III-2).

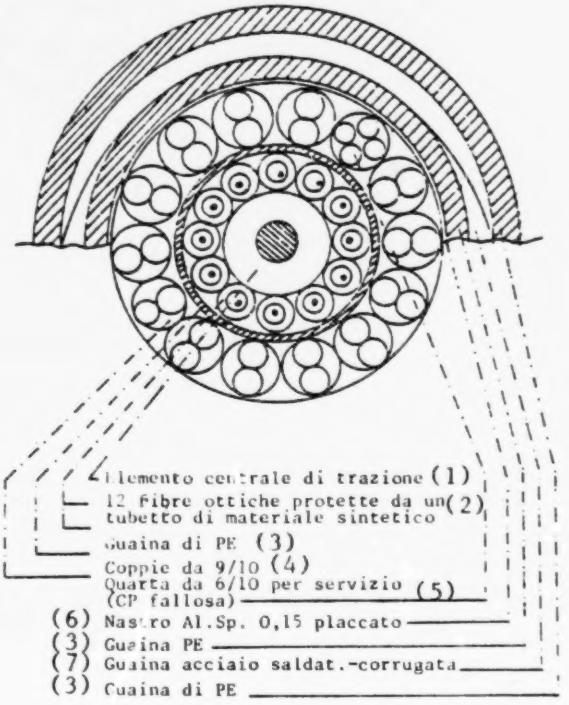

Elemento centrale di trazione (1)
12 fibre ottiche protette da un tubetto di materiale sintetico (2)
Guaina di PE (3)
Coppie da 9/10 (4)
Quarta da 6/10 per servizio (CP fallosa) (5)
(6) Nastro Al.Sp. 0,15 placcato
(3) Guaina PE
(7) Guaina acciaio saldat.-corrugata
(3) Guaina di PE

Figure 2--Structure of Cable

Key:

1. Central element for pulling
2. 12 optical fibers protected by a small tube of synthetic material
3. Polyethylene covering
4. 9/10 pairs
5. 6/10 quadruple for service (CP [expansion unknown] perforated)
6. Plated 0.15 Al.Sp. [expansion unknown] tape
7. Welded-corrugated steel covering

The cable contains 12 fibers of 2 different types: 8 fibers (type A) are qualified only at 850 nm, while the other four (type B) are qualified at both 850 and 1,300 nm. The transmission characteristics of the cabled fibers, as fixed at the time of ordering, are:

	Attenuation (dB/km)	Band (MHz-km)
Type A (at 850 nm)	4.0	1,250
Type B (at 850 nm)	3.5	750
(at 1,300 nm)	2.2	750

The cable has a concentric structure (Figure 2). In the inside ring are the 12 fibers, each of them protected by a loose-fitting covering with outside diameter of 2 mm. The outside ring contains 13 9/10 pairs for remote power supply and remote monitoring of the system, as well as one 6/10 quadruple with perforated insulation for localization of cable breakdowns. The central element for pulling consists of a steel wire with diameter of 2.2 mm. covered with polyethylene. For trench-laying, the external protection is composed essentially of a steel sheath, welded and corrugated, protected by an external covering of polyethylene. The cable's nominal outside diameter is 37.5 mm and its weight is about 1,370 kg/km, while the nominal manufactured length is about 1,000 m.

4. Methods of Measurement

4.1 Measurement of Dimensional Characteristics

Measurement of the dimensional characteristics (Bibliography 4) of the fibers involves evaluation of the radii of the core and of the shell, concentricity error and noncircularity.

The measurement method adopted consists in examining an image of the fiber enlarged 500 times with a transmitted-light microscope. A transparent mask, composed of six graduated half-lines having the same origin and with constant angular distance, is positioned on the photograph of the enlarged fiber with the origin of the half-lines in the central zone of the fiber's section. Direct reading of six values for the radii of the core and of the shell makes it possible, with appropriate elaborations, to project to the geometric characteristics of the fiber.

This measurement method was chosen for the acceptance measurements, because of its simplicity and because of the fact that it offers good repeatability of measurement despite the fact that it can be influenced by factors such as time of exposure of the photographic film or subjective evaluation of the grey in the zone of transition between core and shell.

4.2 Observation of Progression of Refraction Index and of Numerical Aperture

The index of refraction inside the core of the fiber has an almost parabolic progression on which the value of the modal dispersion of the fiber strictly depends.

Observation of it was done by illuminating the face of a fiber 1 meter long uniformly with an incoherent source and noting the variations of intensity on the fiber's output section.

The emission conditions are such as to illuminate the entire core with emission-optics numerical aperture greater than the presumptive numerical aperture of the fiber; the width of the spectrum of light emitted is within about 10 nanometers of the wavelength at which the progression of the refraction index is noted. In the proximity of the output section of the fiber, the optical power not propagating in the core is eliminated by immersing the fiber's shell in a high-refraction-index liquid for several centimeters. The real image of the output face of the fiber, formed by a suitable optical system, is analyzed along a diameter with a photodiode, in such a way that each point measured corresponds, on the output face of the fiber, to a distance of 1 or 2 microns.

The progression of the optical-power intensity thus noted is proportional to the index of refraction, and the progression of the latter can therefore be traced by means of a plotter.

With suitable adaptation of the characteristics of the optical system in reception, one can also project to the value of the numerical aperture.

4.3 Measurement of Attenuation

Measurement of the attenuation of the fibers was done by the cut-back method (Bibliography 5), which is the one selected as the reference method by the ITTCC. Per this method, the optical power in two sections of the fiber is compared (in practice, the end section and a section about 1 meter from the initial one, after cutting of the fiber). In order for the power measured in the short section of the fiber to have propagation conditions close to the stationary ones, it is necessary to control the characteristics of emission in the fiber. For this purpose, the fiber is illuminated uniformly on a circle concentric with the core, having a diameter of 35 microns and with numerical aperture of about 0.14 for the emission optics. The wavelengths at which the measurements are made are obtained by filtering a modulated white light with interferential filters at 850 and 1,300 nm, having a passband corresponding to some 10 nanometers. The observation is made with silicon or germanium diodes (the latter being suitably cooled when used for measurement at 1,300 nm); the signal thus detected is measured by means of an amplifier coupled to the frequency of modulation of the white band.

4.4 Measurement of Bandwidth

Measurement of bandwidth was done in the time domain by calculating the fiber's transfer function as a ratio between the Fourier transform of the pulse at the output of the fiber itself and that of the same pulse after a brief section of fiber taken as a reference (Bibliography 5).

In order for measurement to yield consistent results, several conditions were adhered to. In particular, the lasers used at the wavelengths of 850 and 1,300 nm have a spectral width of ~2 nm at 850 and ~3 nm at 1,300 nm in order to reduce the influence of dispersion of the material; the duration of the pulses is less than 400 picoseconds, with repetition frequency on the order of 30 kHz; emission is done in such a way as to illuminate the entire core of the fiber with a numerical aperture greater than that of the fiber itself; and in order to excite all the modes inside the fiber, use is made of a mode mixer, composed of short pieces of fiber of different kinds joined to one another.

The reference pulse is the output pulse from the fiber under measurement, they are sampled [as published] with a frequency at least quadruple that of the frequency band to be measured. The values thus sampled are worked out by doing the Fourier transforms; these are then calculated for discrete frequency values at intervals of about 1/10 of the band of the fiber. With the ratio of the Fourier transforms of the two pulses established, and with the transfer function thus obtained, the band of the fiber corresponding to the value of the frequency for which the modulus of the transfer function is reduced to half of that relative to the lowest frequency [as published].

5. Results of Measurements in Factory

5.1 Dimensional Measurements

Characterization of the fibers from the geometric point of view takes on great importance inasmuch as the tolerance on the dimensions of the core and of the shell and the errors of concentricity and noncircularity of the core and of the shell have a direct influence on the attenuation of the splices.

The results of the measurements made of the diameters of the core and of the shell are presented in the Figure 3 graphs, from which it is noted that the values exceed the limits of ± 3 μm recommended by the ITTCC, Recommendation G.651. It is reasonable to suppose that since this is the first production of fibers with the 50/125 μm standardized dimensions, the technological procedures and the perfecting of the fiber production process have not yet been completely optimized by Corning Glass Works.

An opposite situation occurs for the errors of concentricity and noncircularity of the core and of the shell, as presented in Table 1, which are decidedly lower than what is called for in the same Recommendation and by the ITTCC [as published].

With the above taken into account, it can be postulaed that in the most unfavorable cases, and therefore for an extremely low percentage of the splices, in which all the conditions that are most adverse for the geometric parameters are present, the attenuation of the splices themselves could take on a maximum value of 0.8 dB, while the mean value would have to be about 0.4 dB (Bibliography 4).

5.2 Transmission Characteristics of the Fibers Before and After Cabling

The attenuation and bandwidth of the fibers before and after cabling were measured and compared on the first 10 factory lengths supplied.

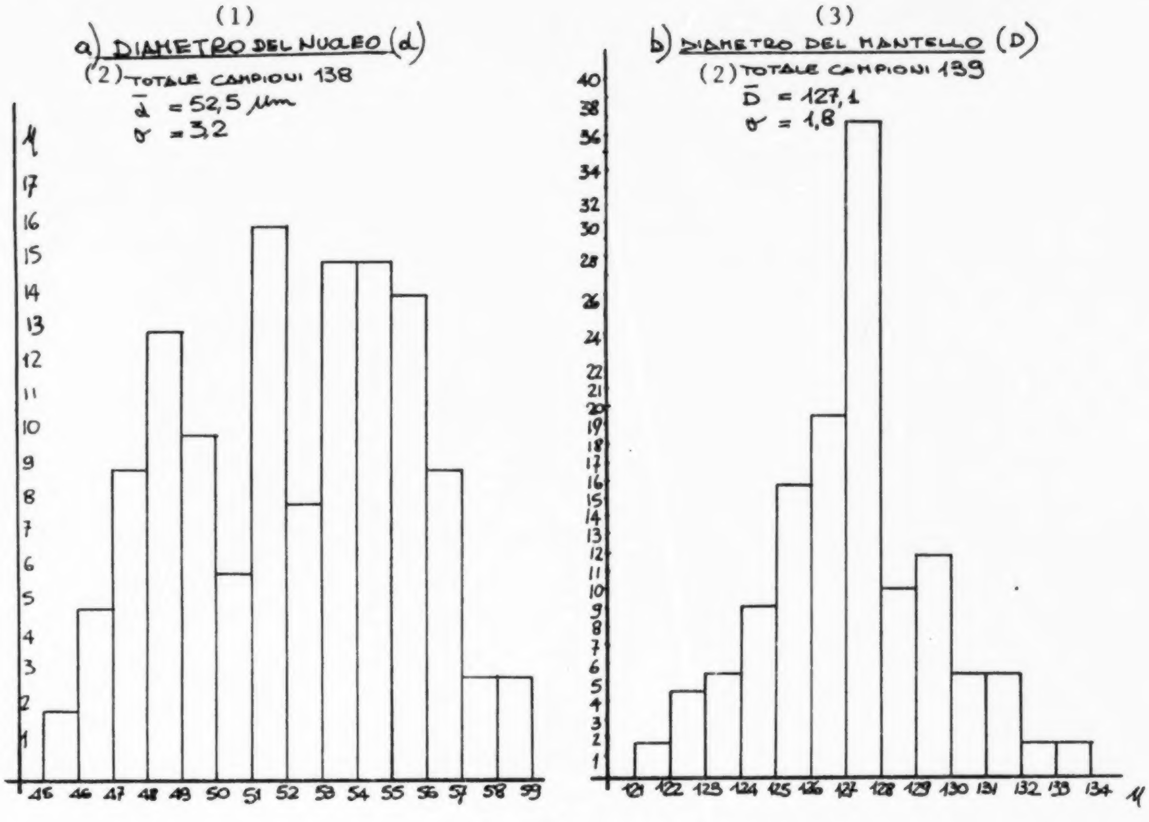


Figure 3--Diameters of the Fibers

Key:
1. Diameter of core   2. Total samples   3. Diameter of shell

---

The results of these measurements show that there is no deterioration of the transmissive characteristics as a result of the fiber-cabling operations, as has already been verifired, for that matter, with the FOSTER/COS 3 cable of Rome. With the Padova-Mestre cable, though, it has been brought out that this conclusion is valid also for low attenuations and high bandwidths. By way of demonstration, the diagrams of Figure 4 are presented, in which the ordinates represent the percentage of the samples that do not exceed the value on the abscissa.

The distributions presented do not correspond to a Gaussian distribution, inasmuch as the maximum attenuation values and minimum bandwidth values required do not limit the statistics to a single portion of the more general statistics for the entire production of fibers.

5.3 Measurements on Finished Cable

5.3.1 Attenuation

The graphs of the attenuation values encountered in 1-km lengths of cable are presented in Figure 5, while the values characteristic of the distributions are

Table 1--Geometric Characteristics of the Fibers

	(1) DIAMETRO NUCLEO (μm)	(2) DIAMETRO MANTELLO (μm)	(3) ERRORE CONCENTR. (%)	(4) NON CIRCOLARITA NUCLEO (%)		(5) NON CIRCOLARITA MANTELLO (%)	
	A+B	A+B	A+B	A	B	A	B
(6) VALORE MEDIO	52,5	127,1	0,55	1,2	1,8	0,5	0,7
(7) SCARTO Q.M.	3,2	1,8	0,4	0,9	1,1	0,4	0,3
(8) LIMITI CCITT	50±3	125±3	≤ 6%	≤ 6%		≤ 2%	

Key:

1. Core diameter (μm)
2. Shell diameter (μm)
3. Concentricity error
4. Core noncircularity
5. Shell noncircularity
6. Mean value
7. Mean quadratic spread
8. ITTCC limits

---

presented in Table 2. It will be noted that in the first window, the attenuation values for the type-A and type-B fibers are very close to one another, and that on the whole, considering the graphs of Figure 5, the attenuations are far lower than those specified in the order and indicated in section 3.

Table 2--Transmission Characteristics of the Fibers

	(1) NUMERO CAMP.	(2) VALORE MEDIO	(3) SCARTO QUADR. MEDIO
a) ATTENUAZIONE (4)			
(5) TIPO "A" (850 nm)	272	2,40	0,21
TIPO "B" (850 nm)	136	2,26	0,11
TIPO "B" (1300 nm)	136	1,00	0,17
b) BANDA (6)			
(5) TIPO "A" (850 nm)	272	1360	109
TIPO "B" (850 nm)	136	905	170
TIPO "B" (1300 Nm)	136	1210	250

Key:

1. Sample number
2. Mean value
3. Mean quadratic spread
4. Attenaution
5. Type
6. Band

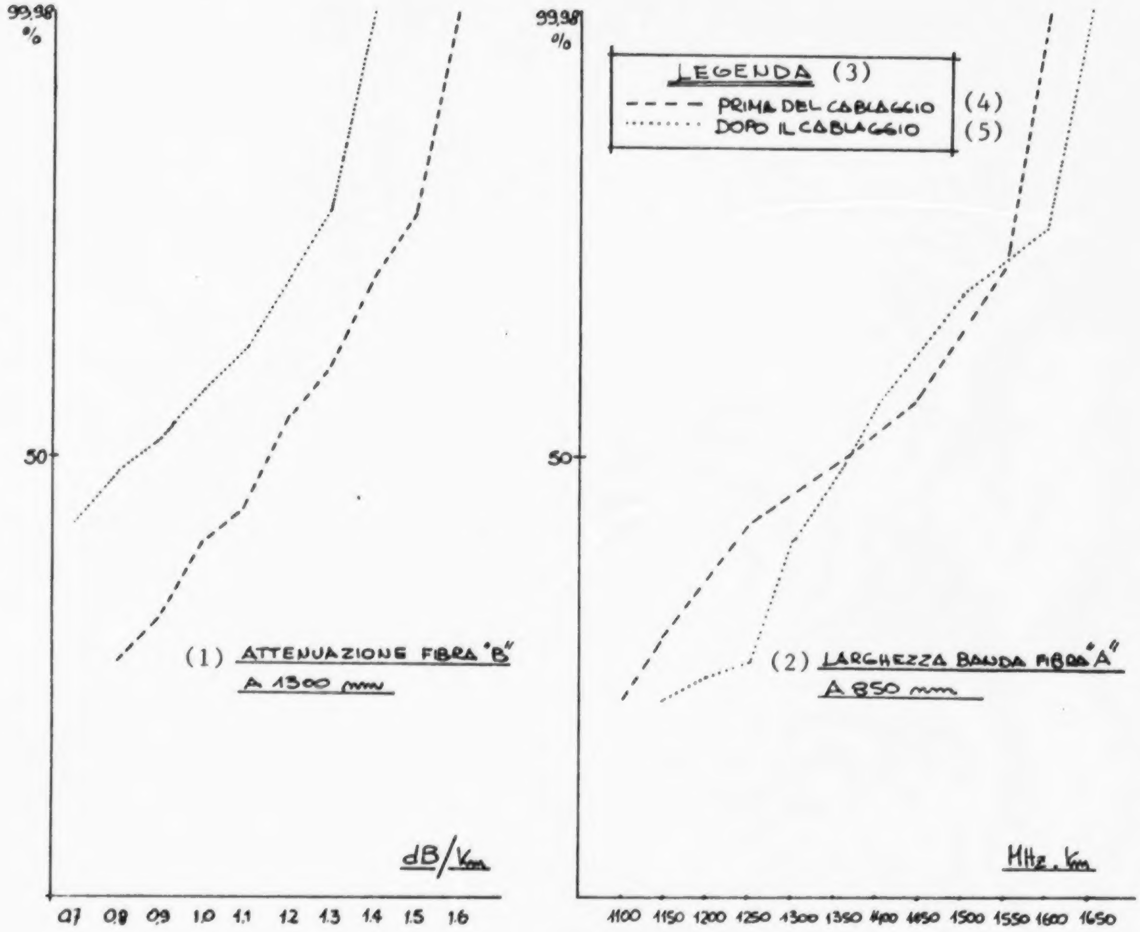


Figure 4--Variation of Transmission Characteristics

Key:

1. Attenuation of fiber "B" at 1,300 nm
2. Bandwidth of fiber "A" at 850 nm
3. Legend
4. Before cabling
5. After cabling

The attenuation values measured on the lengths are also all lower than those required as mean values on the regeneration sections ($\leqslant$ 3.5 dB/km for the type-A fibers, $\leqslant$ 3 dB/km at 850 nm and $\leqslant$ 1.7 dB/km at 1,300 nm for the type-B fibers).

Besides meausrement at fixed wavelength, attenuation measurements were made for the two types of fiber in function of wavelength from 850 nm to 1,400 nm. The typical function $\alpha = \alpha(\lambda)$ is presented in Figure 6, in which one notes, for both fibers, the absence of the peak at 900 nm related to the presence of hydroxyl OH^- and a spectral progression of attenuation that is similar for both types of fiber.

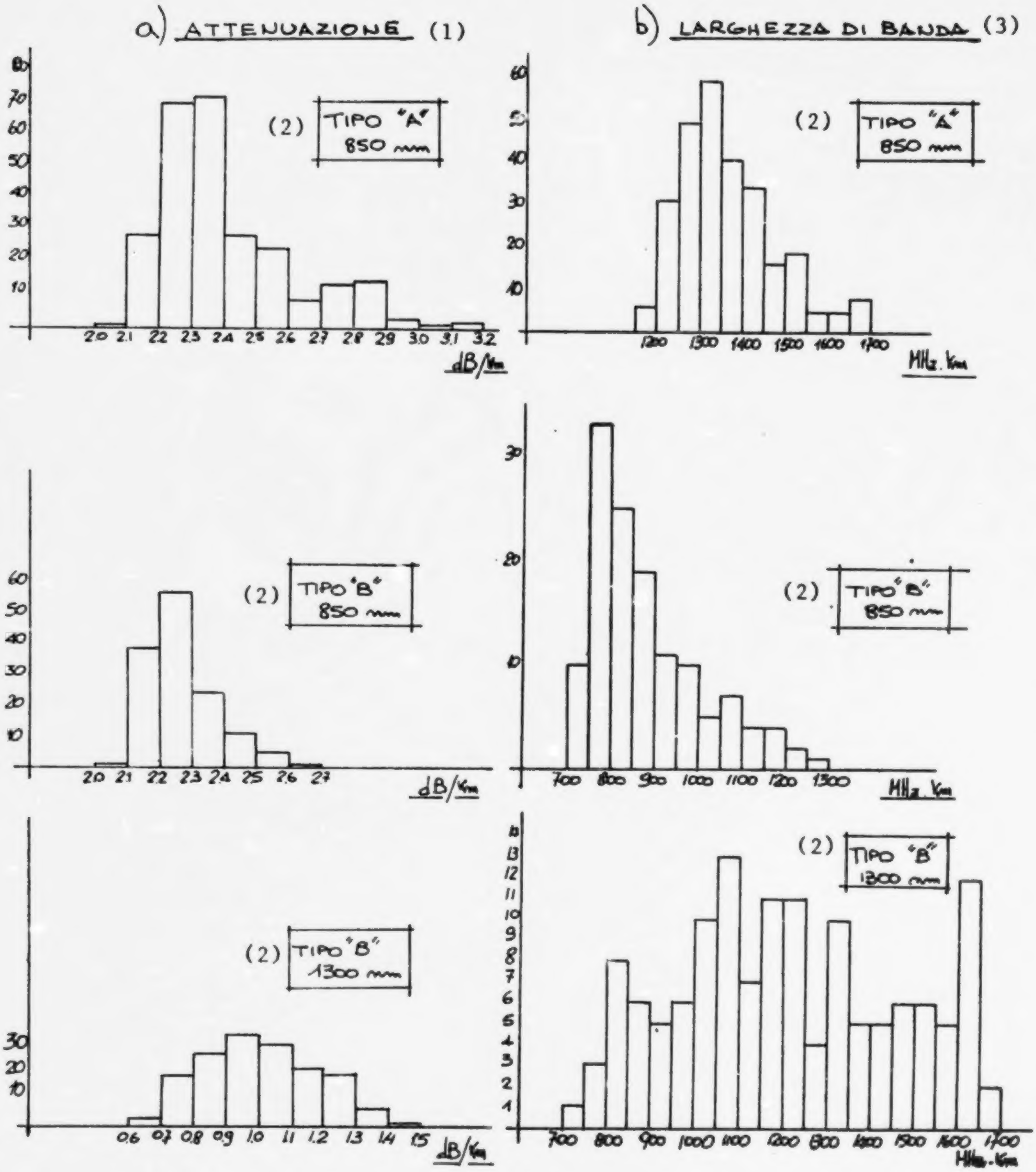


Figure 5--Attenauation and bandwidth of fibers

Key:

1. Attenuation 2. Type 3. Bandwidth

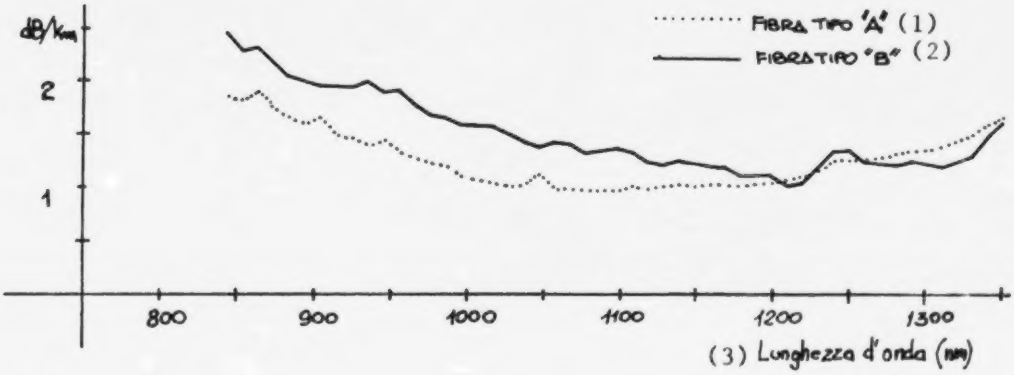


Figure 6--Progression of attenuation, for the two types of fiber, in function of wavelength

Key:

1. Fiber type "A"   2. Fiber type "B"   3. Wavelength (nm)

The progression of the attenuation of the type-A fibers does not rule out a possible use of these fibers too in a second window, on condition of ascertaining the bandwidth available--which was not measured in the factory at 1,300 nm --within the framework of the application.

5.3.2 Bandwidth

The characteristic values of the distributions of the results obtained are presented in Table 2, while Figure 5 presents the graphs of the distribution of the measurements themselves. It is seen in these graphs that several values are lower than those required (by 100 MHz for the type-A fibers and 50 MHz for those of type B). Such cases should not, however, prejudice the overall quality on the regeneration sections, inasmuch as the average of the values measured is well above that of the values required.

5.3.3 Measurements of Numerical Aperture and Index of Refraction

Measurement of numerical aperture was made on a limited number of fiber samples.

The typical values required are 0.21 for the type-A fibers and 0.20 for the type-B fibers, and the results of the measurements made are in line with what was required.

The purpose of measurement of the index profile--this too being limited to just a few samples--was to verify the regularity of the progression of the refraction index. The progressions noted proved regular and similar to one another.

In some cases, a slight central "deep" was detected.

5.4 Mechanical Tests

The mechanical tests of bending, percussion and crushing were carried out only on the optical core of the cable, comprised totally within the most internal polyethylene covering.

In the percussion tests, the lowest energy at which a fiber was interrupted was 6 Kgm, while in the crushing test, the lowest value at which rupture of a fiber was encountered was 1,750 kg.

6. Conclusions

After installation of the Rome optical cable, which constitutes a typical urban installation, the ASST programmed and is in the process of carrying out the first optical-fiber interurban installation in Italy, to connect Mestre and Padova.

The 32 km of optical cable have already been produced and put through acceptance tests in the factory. The results of these tests, presented in this article, have shown that the characteristics of the fibers and the cable correspond to the specifications of the technical norms. In particular, it was confirmed that the fiber-cabling operations do not produce significant variations of the transmission characteristics of the fibers themselves, even in the case of very low attenuations (about 1 dB/km) and very high bandwidths (about 1,250 MHz/km).

The cable has already been completely laid, and the entire installation should be finished by the end of 1982. The results obtained from characterization of the cable in use will be presented in a subsequent article.

BIBLIOGRAPHY

1. Bonaventura, G. and Daino, B., "The Introduction of the Optical Fibers in the Telecommunications Networks." In this same issue of NOTE RECENSIONI NOTIZIE.

2. Bonaventura, G., de Julio, V. and Lombardi, F., "Outlooks for Use of Optical Fibers in the Italian Telecommunications Network," Optical-Fiber Day, AIRI [expansion unknown], Milan, February 1982.

3. Bonaventura, G., Costa, F., Cottatelucci, O., Daino, B., Esposto, F. and Lombardi, F., "COS3/FOSTER Field Trial with an Optical Cable in Rome," Fourth European Conference on Optical Communication, York, September 1980.

4. Calzolari, Pl, Esposto, F. and Noacco, A., "Dimensional Characteristics of Fibre Optic by Photographic Method." Document presented to the IEC [International Electrotechnical Commission] 46E/WG1, Berlin, May 1980.

5. IEC 46E (Sec) 21: "Transmission and Optical Characteristics Tests," June 1981.

6. ATT, "Optical Fiber Tolerances." ITTCC contribution, Comm XV/363, January 1980.

11267
CSO: 5500/2323

PRIVATE FIRM TO TAKE OVER TROMSO EARTH STATION FROM GOVERNMENT

Oslo AFTENPOSTEN in Norwegian 30 Aug 82 p 25

[Text] Beginning on 1 September Drive Electronics A/S will take over the operation and maintenance of the Tromso satellite telemetry station, which is owned by the Norwegian Scientific and Technical Research Council (NTNF). The first phase of the arrangement will last through 1985. Most NTNF employees at the telemetry station have joined the company, which will be managed by the former station manager. The 1983 contract is valued at about 1.5 million kroner.

Behind Drive Electronics is the Asker company A/S Informasjonskontroll with 40 percent of the shares. Rolf Berg Drive A/S owns 31 percent, while the employees in the firm own 29 percent of the shares. Drive Electronics was established this past spring. The idea behind the company is to enter into management contracts, similar to the one recently signed with NTNF, for the traditional development of prototype electronics and equipment for application in various electronics systems. The firm also offers consulting services to companies with no expertise in electronics, director Arvid Overgard told AFTENPOSTEN. He also said that the marketing of satellite services gradually would become one of the firm's main activities. One of the primary services would be to supply data gathered by so-called telemetric satellites. This data can be used for charting natural resources and monitoring pollution levels, for land management planning, and for measuring snow fall in the mountains in order to estimate future water reserves in reservoirs at power plants, to name only a few uses.

"We believe there is a large market for such satellite services and, for this reason, we are considering establishing a commercial processing center to process data from telemetric satellites, according to the needs of our customers," Overgard said.

The satellite telemetry station in Tromso, which has been under construction the past 15 years, soon will begin operations. This will begin next year when the station will hold a key role in testing a satellite system for receiving signals from ships in distress and for getting help to them. The station will be capable of receiving distress signals via the satellite system, which will include a Russian and an American satellite specially equipped for this task.

"This type of transition from the construction phase to the operational phase often means cutbacks in personnel," Overgard said.

"We will retain the number of employees at the station today, however, most of whom already are employed by us, and hire some additional personnel. NTNF no longer will need to have its own people at the station and can concentrate on purchasing any services the research council may need. I believe that this is an arrangement that will benefit both parties.

9336
CSO: 5500/2340

HEAD OF L. M. ERICSSON VIEWS COMPANY'S SUCCESS, FUTURE TRENDS

Stockholm SVENSKA DAGBLADET in Swedish 22 Aug 82 p 32

[Article by Johan Myrsten: "L. M. Ericsson's Future--Fewer Workers But Greater Profits"]

> [Text] "What we Swedes can learn from the Japanese today is above all quality. They are incredibly skillful in producing things which really work, and which are produced so that they come out continuously without mistakes. That they are also skillful in technique is the result of planning, and that we can also be just as good at. And as for sales, I dare to claim that L. M. Ericsson is better than the Japanese."

This was said by Bjorn Svedberg, who has been the managing director of the telephone company L. M. Ericsson for 5 eventful years of increasing business, spectacular foreign orders, large new investments and thorough technical conversions.

Bjorn Svedberg paints L. M. Ericsson's future in very bright colors--despite the fact that the technical changes from electro-mechanical to electronic are going to make additional LM workers surplus throughout the year 1985. The 107-year-old telephone company's wide-reaching activities are confronting ideal future markets, which in certain cases have expectations for "majestic" growth.

'We Make No Mistakes'

On the other hand he shows a certain concern for the concept of "Swedish Quality," even if in careful terms.

"One can see a slight risk that the concept of Swedish quality is getting frayed around the edges. I do not believe that our society is permeated with the idea of quality to the same extent as Japan.

In Japanese industry they do not talk so much about statistics which show what percent of mistakes they have in production. They announce that they make no mistakes. It is a sort of religion: 'We make no mistakes.' Everyone works to avoid mistakes."

This makes production considerably cheaper, says Bjorn Svedberg.

"The best thing that rationalization can do for an industry is to eliminate mistakes in production."

Bjorn Svedberg has himself grown up with production skill. After his education at the Technical University 20 years ago, he came to L. M. Ericsson. In the 1970's his career gained speed and Svedberg was given a key role in the development of the electronic telephone exchange system AXE--the big seller which has so far brought in export orders for over 10 billion kronor from 40 countries, not counting all the subsequent orders for other Ericsson products and services.

Fast Career

In 1976 Bjorn Svedberg was named technical director, and only one year later he was picked at age 40 to be the successor to Bjorn Lundval as managing director of the company's almost 70,000 employees.

He says he has never exactly known why he was chosen. He modestly says first, "It was so difficult to find anyone, so they picked someone who had the same Christian name as the previous managing director."

More officially, the answer is, "I believe that the board picked someone who understood the technology we work with, and who furthermore showed an interest in marketing. Marketing is of course fundamental. I do not believe one should be a pure technician in a technical company."

During his 5 years as managing director Bjorn Svedberg has built up a leadership group around himself, mainly consisting of men of approximately the same age and with long backgrounds with L. M. Ericsson.

"We work together in an informal and dynamic way."

At the same time the new leadership continues largely along the lines drawn up under Bjorn Lundvall's time and before, said Bjorn Svedberg. The very international direction of the company is inherited, according to Svedberg.

Change of Character

Under the new leadership LM has more quickly begun to change character. Of course the telephone stations continue to comprise almost half of the sales, and AXE exchanges are going to give good income throughout this century. But a number of new areas are becoming more important, primarily investment in information technique and "office automation"--meaning combining data technique, telecommunications and modern office electronics. It is a very fast changing world market which has enticed a number of big international companies in different branches into what can be one of the biggest market conflicts of the 1980's. At stake are hundreds of billions.

For L. M. Ericsson's part the investment is manifested by the purchase of half state-owned Datasaab, now the main part of the L. M. Ericsson subsidiary Ericsson Informations Systems (EIS).

"Office automation is something which is expanding today, but which during the second half of the 1980's is going to expand much more," said Bjorn Svedberg.

'Better Than Expected'

"We thought we understood this at the end of the 1970's. The governing idea for the purchase of Datasaab was that they were in a future area which we could not develop. We could have purchased another company, but we could not really avoid office automation. It is becoming such an integrated part of the development of communications, and is such an interesting market. We had Datasaab in mind previously, and when the company was for sale it fit very well. It was especially timely."

The money-losing and partly problem-filled Datasaab's inclusion in the LM company has gone "better than expected," said Bjorn Svedberg. Within a couple of years, according to Svedberg, EIS will be an "exceptionally profitable concern, which will then be able to carry its own costs."

"That was one of the more successful acquisitions that I have participated in."

The question of whether the large investment in EIS and office automation is a mammoth risk with the AXE profits gets the following answer from Bjorn Svedberg:

Risky Not to Invest

"One just does not take mammoth risks. One must be reasonably sure that what one does will go right. Life is not so constructed that risks can be taken with companies which earn a couple of billion kronor. It is not fair to the employees or the stockholders.

"As soon as one invests there is talk of risk. It can be still riskier not to invest."

According to both the LM leadership and experts in the industry the purchase by LM of Datasaab happened at a very good time--even though it is too early to be sure. In the same way many observers say that AXE exchanges were launched at a very appropriate time, after most competing companies, but with better technology.

Just As Great Advantage

Three years ago the LM leadership decided that the AXE exchanges had a technical advantage of 2 years over their competition. Judging today, the LM leadership believes that the advantage is just as great, and that it can be held for a couple of years more.

This can be needed. Although the demand is constantly rising, the market for telephone stations and exchanges is now experiencing "a certain overdevelopment." The main competition is seen in offers upon offers.

"The group which is always competing consists of ITT, Siemens, Philips, two French and four Japanese companies, and Canadian Northern Telecom."

The powerful American telephone company AT&T has recently joined this group. AT&T administers most of the American telephone net and has greater access than any other company in the world. As to the traditional telephone stations and exchanges, however, AT&T is no greater threat to L. M. Ericsson, according to Bjorn Svedberg.

AT&T does not frighten us more than other individual firms. They do not have as great international experience."

Rockhard Competition

But in the new area of office automation the picture is different. Instead of well-defined customers (mainly national telephone monopolies) and about 10 well-known competitors, L. M. Ericsson is meeting a hoard of customers and perhaps hundreds of competitors. These come from many different branches. Some are telephone companies, others are data companies like IBM, Univac, Digital Equipment, Apple, etc. And from years back office businesses such as Olivetti and Rank Xerox. And in addition capital-rich companies from other branches--primarily Exxon.

'Together all these companies form a terrible group. The competition is going to be rockhard, but it is a matter of finding niches (which are very large areas). Our niche is primarily office exchanges, workplace terminals (mainly Alfaskop, banksystem, and lately Eritex, and advanced telex with data memory and word processing).

Many in the Swedish data branch have been doubtful if the Ericsson company can really manage that sort of sales which the market for private data and office equipment demands. But L. M. Ericsson has invested deeply in building its sales force, said Bjorn Svedberg. He also points out that L. M. Ericsson was a large data industry before the Datasaab purchase. The LM leadership believes that it has good system knowledge, an important weapon in the fight on the data and communication market.

Several Growth Branches

Electronics is also the basis for several other branches of L. M. Ericsson activity. Besides the telephone stations and office automation, the concern has several other growth branches. Bjorn Svedberg names four first:

1) SRA Communications, which is now looking for 300 engineers after having doubled its sales in 3 years. SRA can even look forward to deliveries to the JAS [fighter-attack-reconnaissance] aircraft.

2) Mobile telephones, which have been met with great interest in the United States.

3) Power cable and conductors which represent a considerable part of L. M. Ericsson's sales, and when it comes to the new fiberglass technique "we are well in front."

4) Electronic components, which L. M. Ericsson has invested heavily in through the expanded simeconductor firm RIFA.

Thousands Without Jobs

Electronics has, however, brought with it a noticeable dilemma for L. M. Ericsson. Although new orders flow in and the annual sales total has risen from 7.8 billion kronor in 1977 to 16.2 billion in 1981 (in moving prices), thousands of LM workers have been forced to leave their jobs--and more are still out. Certainly there are new employees, but the net result is a reduction.

The question which arises is: If the profitable L. M. Ericsson can not move into electronics without giving up employees, how will it go with smaller, successful electronic firms?

"That depends upon where one begins," answered Bjorn Svedberg.

"We began with mechanical and electromechanical telephone stations. Since then we have had what some may call a technical shock. People's needs declined sharply, and that could not be compensated for with increased sales, because it required so many orders for which there was no market. If one realizes how production changes, one can understand how hopeless and inevitable the situation is.

"But other electronic firms began from the start with just electronics, and there the effects are not the same."

Increased Profits in Sight

Fewer workers but increased profits is the outlook for the next few years. After having been satisfied for a few years with profits of 7-8 percent of the sales sum, Bjorn Svedberg now expects a profit increase. He emphasizes that it is needed.

"Our deliveries often extend over 5-10 years, sometimes with a financing of over 7-10 years. With dynamic development in the world it is difficult to know in advance what can happen over so long a period. Good years follow bad. It is important to have a good average result.

"To be really successful we need a profit level which should be perhaps 50 percent above last year's."

9287
CSO: 5500/2332 END

JPRS 82033

20 October 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 244

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 82033

20 October 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 244

CONTENTS

ASIA

INDIA

Paper Reports, Comments on Insat-1A Failure
(THE STATESMAN, 8 Sep 82) 1

National Television Affected
'Unsatisfactory' Handling of Project, Editorial

Space Organizations Considers Standby for Insat-1B
(THE HINDU, 8 Sep 82) 4

ITI 'Leap' Into Electronic Telecom Systems Described
(THE TIMES OF INDIA, 11 Sep 82) 5

Work of ITI in Telephone Improvement Told
(THE TIMES OF INDIA, 7 Sep 82) 7

Production of Indigenous Electronic Teleprinter Planned
(S. Dharmarajan; THE TIMES OF INDIA, 13 Sep 82) 10

Briefs
- Northeast Telecommunications 12
- Trans-Indian Cable Link 12
- Links With Intelsat 12
- Spokesman on Insat-1A 13
- Progress on Insat-1B 13

NEPAL

Satellite Communications in Nepal
(THE RISING NEPAL, 22 Sep 82) 14

NEW ZEALAND

Moves Underway To Establish Local Silicon Chip Industry
(THE EVENING POST, 26 Aug 82) 16

PEOPLE'S REPUBLIC OF CHINA

Briefs

Guangzhou-Shantou Microwave Line 17
Guangdong Builds Microwave Transmission Network 17

SRI LANKA

Direct Dialing Facilities Soon to All Areas
(D. B. Wijetunge; THE ISLAND, 11 Sep 82) 18

THAILAND

Briefs

New Radio, Television Stations 19

LATIN AMERICA

COSTA RICA

Briefs

Educational Radio Stations 20

NEAR EAST AND NORTH AFRICA

IRAN

Daily Reports New Television Transmitter
(JOMHURI-YE ESLAMI, 11 Sep 82)........................... 21

Made-In-Iran Communications Spare Parts Exhibited
(KEYHAN, 5 Sep 82) 22

SUB-SAHARAN AFRICA

INTER-AFRICAN AFFAIRS

'PANA' To Hold Technical Meeting in Dakar
(NAN, 12 Oct 82) 25

WEST EUROPE

INTERNATIONAL AFFAIRS

Japanese Aid French, Swedish Satellites
(LES ECHOS, 6 Sep 82) 26

DENMARK

Firm Develops Computer-Data Phone With Built-In Teleprinter
(BERLINGSKE TIDENDE, 8 Sep 82) 27

FRANCE

Third Stage of Ariane Rocket Fails, Two Satellites Lost
(LE MONDE, 11 Sep 82; LE MATIN, 11, 13 Sep 82) 29

Possible Consequences, by Jean-Francois Augereau
Reason for Failure
Launch Calendar Before Failure

Nation To Seek 15 Percent of World Telematics Market
(LES ECHOS, 31 Aug 82) 35

PTT Seeks To Spreak Telematics Use Throughout Nation
(Gerard Larpent; LES ECHOS, 7 Sep 82) 37

Briefs

Contract With North Yemen 39

ITALY

Introduction of Optical Fibers in Distribution Network
(De Julio, et. al.; ELETTRONICA E TELECOMUNICAZIONI,
May-Jun 82) 40

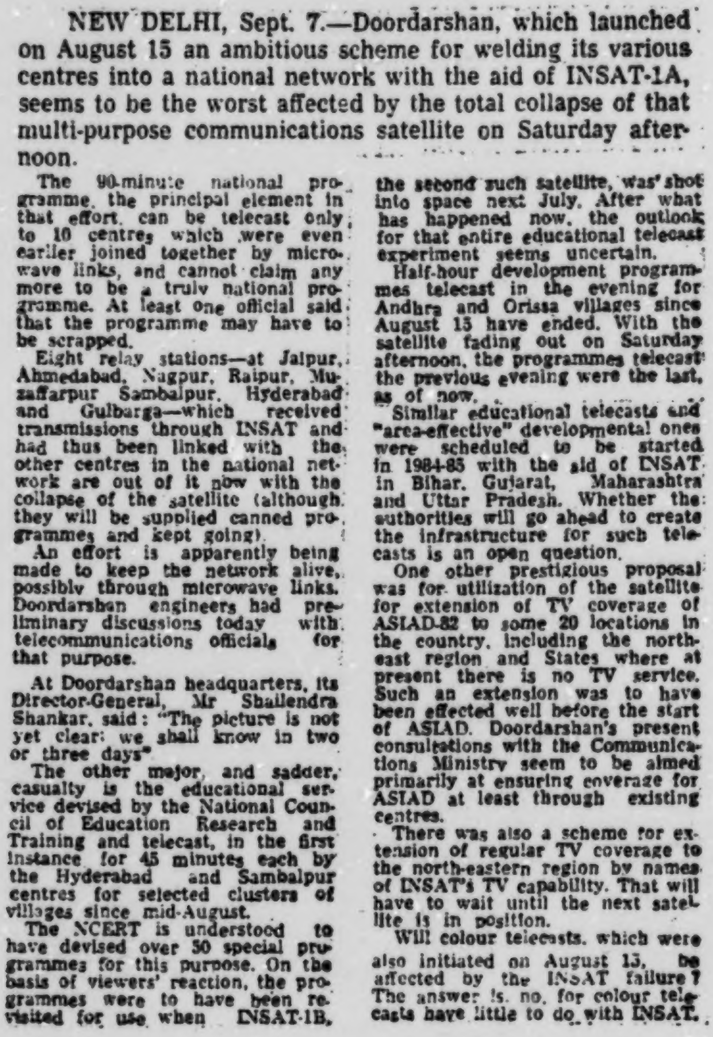
Integration of Satellite Switching System With Ground Network
(Roberto Preti, et. al.; ELETTRONICA E TELECOMUNICAZIONI,
May-Jun 82) 52

PAPER REPORTS, COMMENTS ON INSAT-1A FAILURE

National Television Affected

Calcutta THE STATESMAN in English 8 Sep 82 p 1

[Text]



NEW DELHI, Sept. 7.—Doordarshan, which launched on August 15 an ambitious scheme for welding its various centres into a national network with the aid of INSAT-1A, seems to be the worst affected by the total collapse of that multi-purpose communications satellite on Saturday afternoon.

The 90-minute national programme, the principal element in that effort, can be telecast only to 10 centres which were even earlier joined together by microwave links, and cannot claim any more to be a truly national programme. At least one official said that the programme may have to be scrapped.

Eight relay stations—at Jaipur, Ahmedabad, Nagpur, Raipur, Muzaffarpur Sambalpur, Hyderabad and Gulbarga—which received transmissions through INSAT and had thus been linked with the other centres in the national network are out of it now with the collapse of the satellite (although they will be supplied canned programmes and kept going).

An effort is apparently being made to keep the network alive, possibly through microwave links. Doordarshan engineers had preliminary discussions today with telecommunications officials for that purpose.

At Doordarshan headquarters, its Director-General, Mr Shailendra Shankar, said: "The picture is not yet clear: we shall know in two or three days"

The other major, and sadder, casualty is the educational service devised by the National Council of Education Research and Training and telecast, in the first instance for 45 minutes each by the Hyderabad and Sambalpur centres for selected clusters of villages since mid-August.

The NCERT is understood to have devised over 30 special programmes for this purpose. On the basis of viewers' reaction, the programmes were to have been revisited for use when INSAT-1B, the second such satellite, was shot into space next July. After what has happened now, the outlook for that entire educational telecast experiment seems uncertain.

Half-hour development programmes telecast in the evening for Andhra and Orissa villages since August 15 have ended. With the satellite fading out on Saturday afternoon, the programmes telecast the previous evening were the last, as of now.

Similar educational telecasts and "area-effective" developmental ones were scheduled to be started in 1984-85 with the aid of INSAT in Bihar, Gujarat, Maharashtra and Uttar Pradesh. Whether the authorities will go ahead to create the infrastructure for such telecasts is an open question.

One other prestigious proposal was for utilization of the satellite for extension of TV coverage of ASIAD-82 to some 20 locations in the country, including the north-east region and States where at present there is no TV service. Such an extension was to have been effected well before the start of ASIAD. Doordarshan's present consultations with the Communications Ministry seem to be aimed primarily at ensuring coverage for ASIAD at least through existing centres.

There was also a scheme for extension of regular TV coverage to the north-eastern region by names of INSAT's TV capability. That will have to wait until the next satellite is in position.

Will colour telecasts, which were also initiated on August 15, be affected by the INSAT failure? The answer is, no, for colour telecasts have little to do with INSAT.

What is the net loss to the country from the extinction of INSAT? Officials say the satellite was fully insured and that part of its cost (of over Rs 60 crores) could certainly be recovered. A further sum of Rs 240 crores had been invested in various other hardware and ground installations. These, the officials add will not be allowed to go to waste.

A high level experts team is likely to be constituted for working out a new strategy for satellite programmes following the premature end of INSAT-1A, add UNI and PTI.

The team, which may have representatives from user departments also will try to ascertain the exact causes of the failure of INSAT-1A so that necessary modifications can be carried out in INSAT-1B.

There is no agreement among the various departments on advancing the launch of INSAT-1B. Some feel that it would be unwise to advance the date before ascertaining the causes of the failure of INSAT-1A and carrying out the necessary modifications. The chances of advancing the launch are remote since INSAT-1B is booked for flight in the U.S. space shuttle. Any advancement would mean finding an alternative launch vehicle.

'Unsatisfactory' Handling of Project

Calcutta THE STATESMAN in English 8 Sep 82 p 8

[Editorial]

[Text] Just when the stage was set for utilizing about 1,400 telecommunication circuits of the INSAT-1A by the end of the year, the satellite developed serious fresh trouble. And soon it was declared dead. Its expected life-span had earlier been reduced from seven years to two and a half because of persistent difficulties with the solar sail. In the event, it has been operational, and that too in a limited way, for less than a month. It became "quasi-operational" in June, two months after the launch, and was pressed into regular operation in the middle of August. Its troubles, in fact, had begun before the launch when the solar sail was found to be defective. Whether the substitute did not work because it was originally meant for the INSAT-1B or because it was not adequately tested is not clear. That such questions should arise is itself disquieting, particularly because any trouble with this component was expected to increase fuel consumption well beyond permissible levels and cause technical problems. This indeed seems to have happened; the satellite lost its "attitude orientation"; its contact with the ground began to be frequently disrupted; and it stopped sending cloud pictures. Earlier, it had lost fuel during manoeuvres to free a jammed antenna and to deploy the sail. Lately the antenna was giving trouble again and said to be "looking the other way". All this pointed to a nearly total failure, until the formal announcement of an inglorious end to the whole mission.

Apart from the huge financial loss, the technical setback will compel a fresh look at the unsatisfactory way the project has been handled. The American manufacturers have set up a "failure review board" and are conducting "special tests" to ensure that similar defects do not appear in INSAT-1B, scheduled to be launched in July next year. But responsibility for what went wrong with INSAT-1A needs first to be clearly fixed. The public cannot judge, since the exact nature of the contractual obligations has not been disclosed. If the U.S. agencies which were required under contract to manufacture and launch the satellite had failed in any respect, this needs to be unambiguously spelt out and taken into account in reviewing the INSAT-1B plan. However, judging by the hectic involvement of Indian space scientists immediately after the launch, U. S. responsibility may not have been quite so clearcut. Or was it a case of the Indian space organization getting into the act before strictly necessary, perhaps hoping to claim part of the credit for what was expected to be a spectacular success? The extravagant enthusiasm displayed by Indian spokesmen both before and after the launch did not allow any hard-headed examination of such questions. But they have become extremely important after the project's failure. If it can be ascribed to defects or deficiencies in the American part of the job, there should be a reappraisal of the entire contract. If, however, trouble was caused by premature and unsure Indian intervention, this is an unmitigated disgrace. The satellite could not have developed such serious trouble so soon if it had been transferred to Indian control in a fully operational condition, as it should have been under a normal contract.

CSO: 5500/7240

SPACE ORGANIZATIONS CONSIDERS STANDBY FOR INSAT-1B

Madras THE HINDU in English 8 Sep 82 p 9

[Text] BANGALORE, Sept. 7.

The possibilities of having a stand-by satellite to Insat-1B satellite, scheduled to be launched in July 1983, are being considered by the Indian Space Research Organisation.

The stand-by satellite is being thought of to meet any contingency like the one created by Insat-1A which was dogged by snags from the time of its launching and finally became unoperational.

Discussions are also taking place on the snags and constraints which resulted in the premature turning-off of Insat-1A so that they could be overcome in Insat-1B, according to the Project Director, Mr. P. P. Kale.

PTI, UNI report:

Insat-1B was conceived originally as a stand-by to Insat 1A, which was planned to last for seven years. Now Insat-1B would become the main satellite and the process of the insat programme will be restarted.

Mr. Kale told PTI that discussions were already on to find out if the stand-by satellite could be indigenously produced.

Dr. Kale, however ruled out the possibility of advancing the launch of Insat-1B, which was in an advanced stage of testing.

No chance of collision: Insat-1A, though dead, is likely to be in space for another 1,000 years, according to Mr. Kale.

The chances were "extremely remote," Mr. Kale said, when asked whether the satellite would not hit the neighbouring spacecraft.

The Skylab came down as it was only about 300 km above the earth unlike Insat-1A, which was on a geostationary orbit, about 36,000 km above the equator, he said.

The premature end of Insat-1A was caused by the failure of a valve on the oxidiser line, according to space officials.

Mr. Kale said that the isolation valve on the oxidiser line failed to open. This exhausted the fuel which was used up during the several commands sent to correct the altitude of the satellite on September 4.

The orientation of the satellite is altered by firing small thruster rockets which use the fuel (mono-methyl hydrazine) and an oxidiser (nitrogen tetroxide).

Valve jammed: Since the valve on the oxidiser line was jammed, the thruster rockets received only the fuel, but no oxidiser. At the same time, the repeated attempts to reorient the satellite exhausted the fuel.

Mr. Kale said there was no defect in the design of Insat-1A. The defect with the solar sail which failed to open up has now been rectified in Insat-1B.

Mr. Kale said the solar sail could not be deployed in Insat-1A owing to the low initial repulsive force.

Excess weight: Excess weight was a factor in the "premature death" of Insat-1A.

When the satellite was readied for its mission in February, it was found to weigh 20 kg more than the planned 1,150 kg.

Although this meant overuse of energy, the satellite was sent up without being divested of its extra weight.

This excess weight added to the strains the satellite had to endure in the series of manoeuvres.

Insat-1B is identical to Insat-1A in all respects except its launching, and was originally intended as an on orbital spare with certain major path telecommunications utilisation.

Insat-1B would be located at 94 degrees east longitude (east of Calcutta) in the geostationary orbit.

Launch by space shuttle: While the first satellite was launched by the two-stage Delta 3910 launcher of the U.S. National Aeronautics and Space Administration, the launch of Insat-1B will be by the U.S. space shuttle (the reusable manned launcher) on board its eighth flight.

Both are on a cost-reimbursible basis.

Ford Corpn. review: Meanwhile, the Ford Aerospace Corporation of the U.S., the manufacturers of Insat-1A, had constituted a failure review board. Tests for commanding the VHHR transmitters in various modes were also being carried out by the Master Control Facility. The power drop on August 13 in VHHR resulted in stoppage of transmission of cloud pictures for meteorological purposes by Insat-1A.

Insurance cover: The insurance money for the 'dead' Insat-1A is assured as it has been provided cover for the first 180 days in orbit.

CSO: 5500/7241

ITI 'LEAP' INTO ELECTRONIC TELECOM SYSTEMS DESCRIBED

Bombay THE TIMES OF INDIA in English 11 Sep 82 p 15

[Text] PALGHAT: FROM the fringes of the countryside to hinterland, there have been miles to go. But no more, since the indigenous research and development has covered the distance in one big leap with the introduction of faster communications medium. A dream seems to have come true.

A generation of the family of micro-processor-controlled rural auto electronic exchanges, designed, fabricated and field-tested have been found to function well in typical Indian rural conditions besides being economical to operate and easier to maintain. They will be now installed in hilly, tribal, backward, plain, desert areas to bring the rural regions near to the technologically advanced levels.

Needless to say that the telecom facility is crucial to rural development. Response to a single telephonic call for help could save a crop and be of use in many other ways. It will be worthwhile for Post and Telegraphs to initiate a cost-benefit study of rural telephones, now that a manufacturing programme for these exchanges has been launched.

Another 200-line micro-processor-controlled terminal exchange for use in the rural network will go for field trial shortly.

The Palghat unit of the Indian Telephone Industries, the authorities assert, possesses as many facilities as those of the best of its kind anywhere.

The rural auto exchanges are based on a system expandable from as low as eight lines to 200 lines. There is absolutely no intellectual input from abroad for the system. Its uptodate facilities, skilled manpower and ambitious expansion plans testify to this fact.

The general manager of the Palghat unit, Mr. R. Narayanan, said in addition to the nine exchanges already functioning in the field, 20 would roll out of the factory soon. Designs have been completed to assemble 100 more this year. The target is to produce 200 exchanges annually, Mr. Narayanan said.

Besides, the exchanges for villages, the small system is capable of turning out electronic private automatic exchanges, the electronic transit exchange and the electronic private automatic branch exchange (EPAX). Market studies point to a considerable demand for them other than from the P and T.

An interesting feature of this family is that sub-units will be inter-changeable. This means lower production cost because of the large volume. The maintenance cost is also low since staff training can be restricted to a few types of sub-systems, he said.

THE EPAX SYSTEM

The EPAX system which is already under production at Palghat is designed to meet the varying needs of users like large factories, hospitals and hotels apart from providing communication facility among extensions by dialling a three-digit number. These also provide for automatic transfer of incoming calls from one extension to another, interruption by a priority subscriber, three-way conversation, call forward (disconnection from the original subscriber), routing to the new subscriber and continuous operational supervision.

In spite of its rapid strides, it is idle to overlook the gap between the technology in use and the contemporary technology in advanced countries. Keeping this in view, the Palghat unit is waiting for a collaboration to fill the gap in a few specific areas of production technology for digital trunk automatic exchanges. The evaluation of global bids is expected to be complete in another four months.

In a technology where the rate of obsolescence is breathtakingly fast, there is little time to be lost. Fortunately, the ITI has the infrastructure for updating on product lines once the know-how is available.

This once again underlines the need for a much larger support for the R and D effort. Also, the quality of components has to prove the severest tests. Perhaps, the ITI has to put up with this constraint for some time. The Palghat unit is rather better placed in this direction, as it has some of the latest generation testing equipment available nowhere else in the country.

The eight-year old unit, situated in the Kerala version of Silicon Valley (with several electronic units emerging), has already recorded an output 23,000 lines of electronic switching equipment. It is all set for the third phase of its expansion that will take production capacity to 1,50,000 lines a year. Only the collaborator has to be announced.

Palghat, along with the two other proposed switching factories, will produce about 1.15 million lines by the end of the decade. Still, there might be a gap between supply and demand,

SEVERAL FIRSTS TO CREDIT

The Palghat product lines have a few firsts. Its semi-automatic guided assembly stations have capability to guide the operator to insert various electronic components into the printed circuit board at appropriate places, minimising efforts. These are being introduced on the production line for the first time.

Another first is the computer-controlled "bed-of-nails tester" which identifies faulty components and other assembly faults on a video screen or a printer in order to locate faults quickly.

A computer-controlled backplane wiring tester is also the first of its kind to be used on the production line. Here, the faults like missing, wrong and unwanted connections are indicated on a video screen.

In addition, several dedicated testers developed in-house at the ITI are also used on the production line for testing. The reliability of components used in the systems is increased by subjecting them to "burn-in" and thermal shock for which necessary equipment have been provided,

Still, its biggest achievement will be the provision of a reliable telephone to the countryside.

CSO: 5500/7245

WORK OF ITI IN TELEPHONE IMPROVEMENT TOLD

Bombay THE TIMES OF INDIA in English 7 Sep 82 p 20

[Text] NEW DELHI, September 6 (UNI)--THE Indian Telephone Industries Limited (ITI), which will shortly launch a project for the manufacture of a more reliable and cost-effective telephone instrument with foreign technical assistance, has started developing an all-electronic telephone.

The manufacture of the electronic telephone would be undertaken after comprehensive field trials for adaptation to the local network.

It would, however, take some more years for the ITI to introduce the electronic telephone, whch according to its chairman and managing director, Mr. C. S. S. Rao is yet to be perpected.

Talking to newsmen who visited the ITI factory in Bangalore, Mr. Rao said the ITI would not face any difficulty in manufacturing electronic telephones. The collaboration for the contemporary telephone would take care of electronic options also.

Mr. Rao expected the new project for manufacture of the contemporary telephone instrument to take off for production by January 1984. The project costing about Rs. 25 crores would produce one million instruments per annum besides parts and spares including transmitter, receiver and dials. The final clearance is expected soon from the government. The proposal is to manufacture these instruments, most likely with Italian collaboration, at two locations--one existing and one new. At a later stage, the Srinagar unit of the ITI will also be assembling one lakh additional telephone instruments.

The Bangalore unit will continue to produce 677 instruments developed by the ITI itself until it can straightaway change-over to the production of the electronic version.

Referring to the ITI's performance and its expansion plans, Mr. Rao admitted that its growth had not kept pace with the demand for telecommunication services. Now a new thrust was sought to be given to bridge the gap so that telecommunication services were given priority based on demand by the end of the decade as promised by the government. The ITI would be in a position to support the government with the equipment necessary to fulfil this promise, Mr. Rao said.

Imported Know-How to Go

He said it was not necessary for the ITI to undertake manufacture of all items necessary for this purpose. It was identifying a number of projects where state electronic corporations could supplement the ITI's efforts by producing items of same quality and reliability.

In the coming years, Mr. Rao said, the ITI's dependence on imported know-how would progressively come down. At present, roughly a little over 60 per cent of current production of the ITI was related to products either entirely developed by its own research and development or with improvements incorporated by it in co-ordination with the telecommunication research centre of posts and telegraphs department.

He said as part of the modernisation programme, substantial investments would be made in areas of design and process improvements. These include, among others, setting up of a modern printed circuit board facility of high quality and reliability and a modern hybrid micro-circuit facility to enable high degree of miniaturisation. This would pave the way for large scale manufacture of integrated circuits at present imported.

Mr. Rao said with over Rs. 10 crores of capital investment in equipment and facilities and over 500 highly qualified engineers, the ITI's R and D set up was one of the best in Asia. During the current plan period another Rs. 14 crores would be spent on R and D division. In recent times, the R and D wing had developed more reliable systems in transmission and switching. At present a low cost small earth station was under development, he said.

The ITI had already started producing a small nine-line rural small electronic exchange and would soon take up manufacture of a 1000-line digital switching system. A 200-line modern microprocessor controlled exchange for use as a terminal exchange in rural network would go for field trial shortly.

For teleprinter communication, a micro-processor controlled 200-line telex exchange hs been developed and will be produced shortly.

Mr. Rao said the ITI was ready with facilities to enter the electronic switching equipment manufacture with a French firm and would be manufacturing the well proven E ten B system of digital electronic exchanges catering to both local and transit applications.

The French firm would also transfer know-how for a more modern version it was developing, he said.

Mr. Rao said, the ITI's total production would reach Rs. 320 crores in 1984-85 if all the projects went through on schedule. For the current year, the production target had been fixed at a little over Rs. 180 crores. The total instruments production this year from all the units of the ITI would be over 5.5 lakhs, a new record. Of these 1,5 lakhs would be of the new design 677 instruments.

Referring to Rae Bareli unit, he said it would soon start producing the indigenously developed crossbar system. A limited collaboration had been entered into with Bell telephone manufacturing company of Belgium for this purpose. First supplies from this unit with imported components and subassemblies were expected to roll out next month, he added.

CSO: 5500/7239

PRODUCTION OF INDIGENOUS ELECTRONIC TELEPRINTER PLANNED

Bombay THE TIMES OF INDIA in English 13 Sep 82 p 5

[Article by S. Dharmarajan]

[Text] MADRAS, September 12.

A SMALL investment, innovative ideas and value engineering in research and development in a public undertaking here have spared the country from being saddled with an obsolete technology.

Would-be collaborators in the production of electronic teleprinters might have succeeded in taking the country for a ride had not this R and D group acquired the assessment capability.

Parallel with the search for a collaborator this group in Hindustan Teleprinters Limited (HTL) worked on and produced an electronic teleprinter. It was of a generation behind the contemporary technology available with some of the multinationals in the field. But their effort in the area enabled the R and D to point out bluntly the obsolescence of the technology offered. The bidders then came with the latest version.

FOREIGN TECHNOLOGY

HTL's project for the manufacture of electronic teleprinters is hopefully to be launched early next year subject to the government's clearance of production technology from Philips of Holland, Olivetti of Italy or Sargam of France for the latest version. HTL has formed a special group of R and D to update its technology and to make the Indian version multi-lingual.

With nearly two decades' experience in printed text communication and an uninterrupted impressive performance record, HTL as part of its extensive modernisation and upgradation programme is setting up the unit for electronic teleprinters at Hosur. The World Bank has sanctioned a loan of Rs. five crores towards the capital cost of this project.

According to Dr. Seetharaman, chairman and managing director of HTL, the pricing of the machines will be competitive. Production to begin initially with the assembly of 8,000 units a year will be raised to 12,000 units in the second phase and to 20,000 later. He contends that the maintenance cost would be less and operation fatigue is minimised by feather-touch key board switches of lower operating pressure. Further, the mean time between failures or calls is estimated to be three times more than that of the conventional electro-magnetic version. Needless to say, with the induction of the electronic teleprinter, the communication room will be less noisy.

Electronic memories holding up to 32,000 characters are being implemented in these units. This has enabled the incorporation of a range of features including vertical and horizontal tabulation, message editing, correction and the like. Another important feature is the capability for adaptation to multi-language or multi-script operation.

It can be wholly integrated with the public telegraph networks where because of increased communication, higher traffic flow could be generated. It will usher in electronic office of the future even in rural areas with minimum operational and maintenance staff.

USEFUL FALL-OUT

A fall-out for HTL from this diversification programme is a range of new electronic products lines like floppy disc drives, data modems and other computer peripherals. Negotiations are under way with prospective collaborators for the manufacture of floppy disc drives. Its R and D has made striking strides in respect of data modems and a series of generic equipment has been contemplated to fulfil the requirements of communication. Already, HTL has a licence to manufacture 500 numbers of data modems.

The confidence among the R and D group is justified by rising volume of trade enquiries. Incidentally, the R and D facilities including laboratories and the additional infrastructure are financed from the resources of this company which for the last three years has been remitting to the national exchequer a dividend of Rs. 14.75 lakhs annually apart from paying nearly Rs. 3 crores as duties,

In the context of the decision to go electronic, HTL will stop manufacturing the conventional teleprinters. But Mr. Seetharaman assures that there would not be a single case of retrenchment. For, production of spares for 100,000 electro-mechanical teleprinter now in use would continue. Besides, most of the employees with a little in-house training are being inducted into the programme for manufacturing electric typewriters.

CSO: 5500/7246

BRIEFS

NORTHEAST TELECOMMUNICATIONS--The telecommunication network in the difficult terrain of the North-eastern region is to get a big boost with the provision of Rs 75 crores for its development during the Sixth Plan period, reports UNI. The Posts and Telegraphs department has initiated several measures for the expansion and modernisation of telecommunication services in the region including automatisation of manual exchanges at far-flung district headquarters. Provision of telephone connection practically on demand by 1985 and installation of automatic telephone exchanges at the district headquarters are some of the salient features for the region during this plan period. The seven microwave systems and 30 UHF systems have been planned for the execution during the current Plan to provide reliable and stable long distance transmission media. There is a proposal to open three more telex exchanges at Jorhat, Kohima and Silchar and expansion of telex exchanges at Shillong-Gauhati and Tinsukia to provide better telegraph facilities. Mokokchang, Kohima and Tuensang in Nagaland and North Lakhimpur in Assam have been selected as focal points for integrated telecommunication development in the region. [New Delhi PATRIOT in English 8 Sep 82 p 5]

TRANS-INDIAN CABLE LINK--MADRAS, Sept. 7--The Government of India is considering plans for a high grade trans-Indian microwave link between Bombay and Madras, dedicated to international traffic. This will link the IOCOM (Indian Ocean Communication) Madras-Penang submarine cable system with the Bombay-United Arab Republic cable service, now in an advanced stage of construction. This was reported by Mr. K. C. Katiyar, Director-General, Overseas Communications to the second management meeting of the seven Commonwealth nations' telecommunication administrations, who jointly own the 2500 km cable link between Madras and Penang, laid at a cost of over Rs. 30 crores by India. The IOCOM cable was the first broad band cable to touch the Indian shores and had proved its usefulness by providing a complementary medium to the Intelsat system, he said. According to circuit estimates by the Indian Ocean Data Gathering Group at Sydney, the IOCOM cable would reach the "fill" towards the end of the Eighties. [Madras THE HINDU in English 8 Sep 82 p 16]

LINKS WITH INTELSAT--NEW DELHI, September 8 (PTI)--Contacts have been re-established between Port Blair and Madras earth station through INTELSAT, it was announced here today. Telecommunication channels have been put through between Port Blair and Madras and between Port Blair and Calcutta. The Delhi comunication link to remote and far-flung areas was cut off when INSAT-1A failed to operate two days ago. A spokesman of the communications ministry said the posts and telegraphs department was making all-out efforts to re-establish contacts within the next three days with these areas which included Leh, Aizwal, Kavarathy and Car Nicobar through INTELSAT. Telecommunication links between the seven earth stations were connected through INTELSAT from 1980 and were switched on to INSAT-1A only last month after the launching of India's own domestic satellite in April. Out of 4,000 channels, which were available to the P and T department through INSAT-1A, only 300 channels had been used so far. It was proposed to increase the number of channels to 1,500 by this year-end. As a result, the spokesman said, the sudden failure of INSAT-1A had not affected much of the telecommunication links in the country as also the foolproof terrestrial links. [Bombay THE TIMES OF INDIA in English 9 Sep 82 p 5]

SPOKESMAN ON INSAT-1A--NEW DELHI, Sept. 9--Telecommunication links in the country have not been affected in any way by the sudden failure of INSAT-1A a spokesman of the Communications Ministry said yesterday, reports PIT. He said that out of 4,000 channels, which were available to the Posts and Telegraphs Department through INSAT-1A, only 300 channels had been used till now. It was proposed to increase the number of channels to 1,500 by the end of this year. [Calcutta THE STATESMAN in English 10 Sep 82 p 9]

PROGRESS ON INSAT-1B--BANGALORE, Sept 13 (UNI)--Work is going on according to schedule on the Indian National Satellite INSAT-1B slated for launch in July director of Indian Space Research Organisation's (ISRO) satellite centre Prof U R Rao told UNI here today. He was commenting on reports in a section of the press that work on INSAT-1B had been suspended following the failure of INSAT-1A and a high level ISRO team was rushing to the United States for discussions with the Ford Aerospace Corporation the manufacturers of INSAT satellites. Prof Rao said data relating to the defunct INSAT-1A which collapsed due to sudden depletion of on-board fuel, had been flown to California and the data had to be first analysed thoroughly. Any corrective steps on INSAT-1B would have to be made before the final space simultation tests. An Indian team might go over to the United States then he added. Meanwhile the efforts to re-establish contact with INSAT-1A has not so far yielded any result. The master control facility at Hassan would, however, continue its attempts, according to an ISRO source. The space scientists were trying to re-establish contact with the failed satellite to find out its exact health parameters at the time of its collapse on 6 September. [New Delhi PATRIOT in English 14 Sep 82 p 7]

CSO: 5500/7247

SATELLITE COMMUNICATIONS IN NEPAL

Kathmandu THE RISING NEPAL in English 22 Sep 82 p 2

[Excerpts] Mid-October, 1982 will unveil the age of satellite communications in Nepal. To that end, the highly sophisticated installation of the satellite earth station "SAGARMATHA" at Balambu in the district of Kathmandu has been completed by August 10, 1982. With the inauguration of the Sagarmatha Satellite Communications Station at Balambu in Kathmandu, Nepal joins the family of satellite communicators through the INTELSAT satellite 4 A & 5 over the Indian Ocean. From that day, Kathmandu's operator will be able to dial directly any international telephone numbers. With the operation of the 60 channel capacity of the Standard 'B' earth station, Nepal's communications with Europe in the west and Japan in the east will be highly faciliated. And telex will be fully automatic.

Coming to our Nepalese communications earth station "Sagarmatha", the project was undertaken under the joint collaboration of Nepal and the British Government. The £3.01 million British aid has contributed substantially in the overall implementations of the project-installation of the earth station equipment, the construction of Standard 'B' type earth station, installation of satellite terminal equipment in the International Telecommunications Building at Tripureswar. Marconi Communications International Company of United Kingdom, the contractor of the project, has speeded up the construction and installation to complete the entrusted works in time and as per schedule and project programme.

With Rs. 10 million of Nepal Telecom Corp, the International Telecom. Building at Tripureswar has been getting the finishing touches. Installation works have started briskly. The construction, the installation etc. are done in time.

The various mandatory and general testings of the earth station is underway in the month of September of 1982 and by mid-October of 1982, the international telecommunication services with the help of satellite are expected to start. With the completion of this highly important project in the Nepalese Communications field Kathmandu's operator will directly dial international telephone numbers; the international trunk services will be quick and reliable; the telex ubscriber will also be able directly to dial the telex numbers throughout the world, i.e. the telex-services will be fully automatic; intercountry telex services will be available even outside Kathmandu valley.

CSO: 5500/4301

MOVES UNDERWAY TO ESTABLISH LOCAL SILICON CHIP INDUSTRY

Wellington THE EVENING POST in English 26 Aug 82 p 30

[Text]

THE DSIR has begun moves that could see the birth of a silicon chip industry in New Zealand.

The director of the physics and engineering laboratory for the DSIR, Mr Richard Morris, said today that space had been set aside in the Lower Hutt laboratories to establish a programme that could, among other things:

- Train the next generation of engineers and physicists in silicon technology.
- Set off new research in various fields of the technology.
- Increase the chances of attracting a major "wafer fabrication plant" (silicon chip factory) in this country.

Students

He said the first steps had been completed and by 1985 it was hoped to be in full operation, with universities already indicating that by then they would expect to supply 20 students to take part in research and development work.

Speaking to the national electronics conference in Wellington, Mr Morris said the worlds of electronics, aeronautics, space technology and even such things as biotechnology and defence programmes were now dominated by silicon technology.

He said that now was the time for New Zealand industry to enter the field, with the impending availability of silicon-chip-types by the end of this decade at economic prices.

The industry's competitors overseas were similarly moving with the times, and some countries such as Singapore, Hong Kong and South Korea were setting out to dominate the production markets.

Equipment

The DSIR was getting its first equipment from California — second hand — this year.

Mr Morris said the silicon technology section would come under the charge of Dr Mike Andrews, a physicist from Edinburgh University.

CSO: 5500/9038

BRIEFS

GUANGZHOU-SHANTOU MICROWAVE LINE--The Guangzhou-Shantou TV and broadcasting microwave main line has been installed. After test and trial, the quality of the line is good. The line will be used from 1 October. From the National Day, people in the eastern part of Guangdong Province will be able to watch TV programs which will be clearer than those at present. This microwave line is some 390 km long. Microwave stations have been set up in Guangzhou, Dongguan, Huiyang, Zijin, Fengshun and Shantou. After this line is used, a frequency channel will be used to transmit a color TV program and two broadcasting programs. [Guangzhou Guangdong Provincial Service in Mandarin 2350 GMT 27 Sep 82]

GUANGDONG BUILDS MICROWAVE TRANSMISSION NETWORK--Guangzhou, 27 Sep (ZHONGGUO XINWEN SHE)--The construction of a microwave radio and television broadcasting network linking Guangzhou and Shantou was recently completed, and will be put into operation on 1 October. In addition to this, a branch network linking Guangzhou with the Shenzhen and Zhuhai special zones will be built up later. This is the first relatively long-distance microwave radio and television transmission network for Guangdong Province, of which all the equipment is domestically produced. When put into use, this network will be in charge of transmitting one color television channel and two radio programs to eastern Guangdong, covering Huiyang, Meixian, Shantou and other prefectures. The completion of this network will expand the radio and television broadcasting service area, as well as improve the reception in eastern Guangdong. Another two microwave networks are planned for Guangdong Province: One linking Guangzhou with Tongshi of Hainan Island, and the other linking Guangzhou with Ruyuan. With more than 1.5 million television sets, Guangdong is the province with the most television sets in China, and television viewers account for 70 percent of the province's population. [Text] [HK280805 Beijing ZHONGGUO XINWEN SHE in Chinese 1313 GMT 27 Sep 82]

CSO: 5500/4100

DIRECT DIALING FACILITIES SOON TO ALL AREAS

Colombo THE ISLAND in English 11 Sep 82 p 2

[Article by D. B. Wijetunge]

[Text] "AT present the Direct-dialling facility has been extended to almost every part of the country except Jaffna and Kurunegala. Within two months each and evey town in Sri Lanka would get this facility " said the Minister of Post and Telecommunications Mr. D. B. Wijetunga at the ceremonial inauguration of the new Direct-Dialling Auto-Exchange Centre in Badulla.

Prime Minister R. Premadasa inauguratedl the Direct-Dialling Auto-exchange cabin by lighting the traditional-oil lamp amidst the chanting of Seth-Pirith by the Maha Sangha.

Mr. Wijetunga further said — "It was an advancement of a developing country to obtain the facilities of direct-dialling. The Government had spent about Rs. 500lakhsfor the construction of this centre with the assistance of the Japanese Government. At present there are about 500 subscribers, and with the opening of this centre arrangements will be made for the extension of further facilities for about 650 subecribers in the Badulla area, he added.

This Auto-Exchange system is guaranteed for about 50 years, and on the sixteenth of this month, another Direct-Dialling Auto Exchange centre with be commissioned at Chilaw, the Minister said.

Continuing the speech the Minister further said — "when this government came into power in 1977, under the leadership of President J. R. Jayewardene, this country had a dead Telecommunication service and the present government had to make an active effort to give life to the upliftment of this dead system.

The M.P. for Badulla Mr. Vincent Dias also addressed the meeting.

CSO: 5500/4300

BRIEFS

NEW RADIO, TELEVISION STATIONS--At its regular meeting on Wednesday, the broadcasting directing board granted permission to set up a new television station and two more radio stations in the country. The television station is controled by the Public Relations Department. It will be set up at Khao Samo Klaeng, Muang District of Phitsanulok Province. The station will telecast on Channel 11, but will need more budget to buy needed equipment. The budget is yet to be received from the government. Therefore the department will have to use Channel 7 in the meantime and will switch to Channel 11 at the earliest possible date. Of the two radio stations, one will be controled by the Public Relations Department and will be set up in Rat Buri Province. The other will be controled by the 2nd army region and will be set up in Kalasin Province. Both stations will have 10 kilowatt transmitters. [Text] [BK121205 Bangkok Domestic Service in English 0000 GMT 10 Sep 82]

CSO: 5500/4302

BRIEFS

EDUCATIONAL RADIO STATIONS--A program called "The Teacher at Home" will result in the creation of 28 education radio stations in Costa Rica. Each station will cost 7 million colones. The princess of Liechtenstein is in Costa Rica to dedicate the cultural radio network. Her father is the president of the communications network of the principality of Liechtenstein and her government is financing these educational radio stations. Approximately 10 years ago, an institution was formed in Costa Rica to operate a project called "The Teacher at Home." These radio stations derive from this project. The Austrian Embassy official in charge of cultural affairs in Costa Rica has said this is a pilot project in Latin America. For the time being, only seven radio stations will be dedicated throughout the country. [PA291521 San Jose Radio Reloj in Spanish 1200 GMT 28 Sep 82]

CSO: 5500/2002

DAILY REPORTS NEW TELEVISION TRANSMITTER

GF201946 Tehran JOMHURI-YE ESLAMI in Persian 11 Sep 82 p 4

[Text] Tabriz--Mr Mohammad Hashemi, the director general of the Voice and Vision of the Islamic Republic of Iran, who had gone on a visit to the east Azarbayjan Province with some of his advisers in order to survey the prospects and deficiencies of the Voice and Vision of the Islamic Republic of Iran, left Tabriz for Tehran yesterday afternoon.

During his tour, Mr Mohammad Hashemi met Ayatollah Malakuti, the imam's deputy in Azarbayjan, the Tabriz Friday imam, Ayatollah Meshkini, Seyyed Hoseyn Musavi-Tabrizi, chief revolution prosecutor and Dr Ghafuri-Fard, the energy minister, who are now in Tabriz to attend the weeklong martyrdom anniversary ceremonies of the great martyr Ayatollah Madani.

The director general of the Voice and Vision of the Islamic Republic of Iran spoke to the correspondent of the central news unit, Tabriz center, at the end of his visit to eastern Azarbayjan regarding the elimination of the deficiencies of the transmission of the Voice and Vision of the Islamic Republic of Iran in the border areas of northern Azarbayjan, and said that the Mughan radio center will reach its optimum capacity and next month, a 10-kilowatt transmitter will be set up in the Mughan district.

CSO: 5500/4701

MADE-IN-IRAN COMMUNICATIONS SPARE PARTS EXHIBITED

Tehran KEYHAN in Persian 5 Sep 82 p 6

[Interview with Engr Va'ezi, managing director of the Iran Communications Company]

> [Text] About 1,000 kinds of parts needed for the communications of the country were displayed in an exhibition for the Iranian industrial workers and builders to move towards industrial self-sufficiency through the blossoming of the talents and encouragement of the Iranian industrial workers.

The exhibition for the needed spare parts of the communications company called Shahid Shahrokh Tahmasebi, was opened yesterday morning with recitations from the Koran in the presence of the managing director and the authorities of Iran Communications Company at the Payam Club. In this exhibition, which will be open until next Sunday, 12 September, from 0800 to 1400 hours, except for holidays, about 1,000 kinds of spare parts needed for the communications systems of the country will be displayed. The material for and kind of these spare parts range from the most simple to the most complex and are parts which can be produced in Iran. The owners of all vocational and small workshops can choose any part which suits their own trade and take steps to produce it.

In this regard, Engineer Va'ezi, the managing director of Iran Communications Company, said to the correspondent of the ISLAMIC REPUBLIC NEWS AGENCY: The establishment of this exhibition for the purpose of providing the short term needs of the Communications Company and ultimately industrial independence from abroad follows the establishment of the industrial office of this company. This exhibition is the first step towards introducing the sample spare parts which can be produced domestically with instructions to the Iranian manufacturers. This equipment is mostly for city and intercity telephones, cables, and energy. The next step is to display microwave parts.

Responding to the question of what resources and facilities will be placed at the disposal of the volunteer manufacturers, he said: If we are assured that a volunteer is able to manufacture the needed part, all kinds of resources will be placed at his disposal.

Concerning telephones for the industrial centers for agricultural production and services which are located on the roads around Tehran, he said: These centers have been identified and their requests will be granted after studies are made and priority will be given to the needs of the society. The cable installations along the Karaj and Saveh roads have been completed for 140 telephones which will be installed and the rest are being installed.

Engineer Va'ezi also said: We are planning in this area to establish centers to handle 500-1,000 numbers along the roads so that factories located along the roads will have no communication problems in the future.

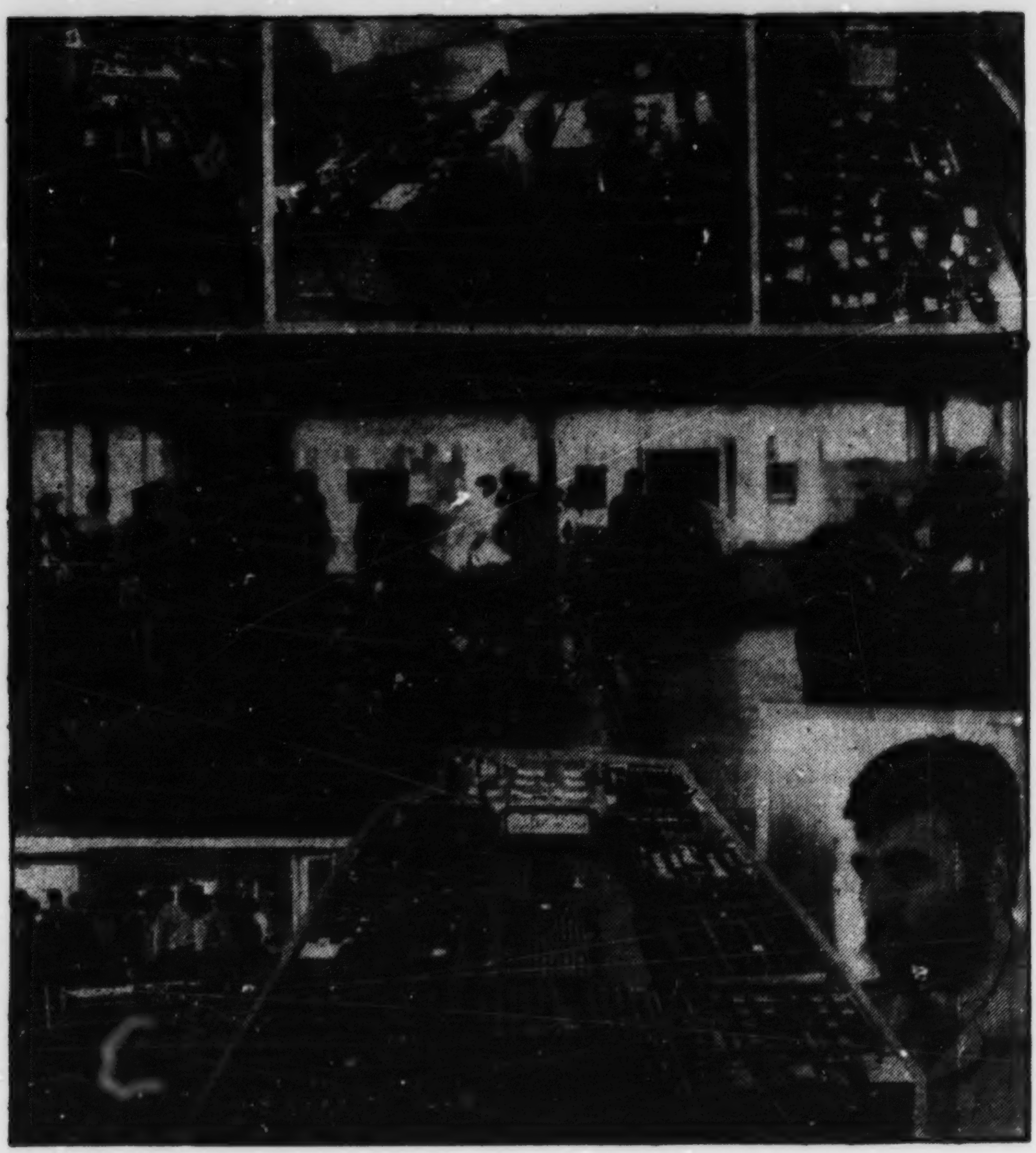
Concerning the transfer of telephones in Tehran, he said: If it is technically possible and the necessary conditions exist for the applicant, telephone transfers will be done.

Concerning providing telephone communications in the war regions, Engineer Va'ezi said: This job began a long time ago and still continues. Thusfar, we have been able to establish communications for the needs of the organizations, even in the villages.

Concerning the possibility of granting new telephones to applicants in the provinces and Tehran, the managing director of the Communications Company said: According to plans, we give priority to the provinces and the deprived areas of the country. The establishment of these exhibitions to provide the needed equipment is for the purpose of bringing services to the deprived provinces as soon as possible. In regards to Tehran also, since the preparations have been made previously, efforts are being made, without decreasing the resources of the deprived provinces, to grant telephones, giving priority to those who have telephone receipts. Possibly by the end of next year, in addition to the new telephones, 18,000 more telephones will be installed for the residents of Tehran.

Concerning the exhibition of the needed equipment by the Communications Company of martyr Tahmasebi, the director of the industrial office of the Communications Company and head of the exhibition said to the correspondent of the ISLAMIC REPUBLIC NEWS AGENCY: Presently, a great number of the spare parts needed by the Communications Company are produced domestically and the contracts for a number of other parts have been signed with

Iranian industrial workers and factories and they are being manufactured. About 1,000 needed communications spare parts which were not previously produced domestically are being introduced to the manufacturers in this exhibition. Efforts will be made to change about 20 percent of the equipment to several forms, taking into consideration the variety and limited needs, in order to make these projects feasible for the manufacturers.



9593
CSO: 5500/5351

'PANA' TO HOLD TECHNICAL MEETING IN DAKAR

AB121611 Lagos NAN in English 1600 GMT 12 Oct 82

[Text] Dakar, 12 Oct (PANA/NAN)--The Pan-African News Agency (PANA), will host the PANA Technical Committee meeting from 26 October to 30 October, at the agency's headquarters in Dakar, Senegal.

This committee, established by the inter-government council of the agency, is composed of technical directors from the PANA regional pool headquarters--Libya, Nigeria, Senegal, Sudan, Zaire, Zambia--as well as UNESCO and ITU experts.

Its objective is to study and propose solutions to problems related to PANA equipment and telecommunications links.

At its last session in June, the technical committee decided on the specification and quantity of the equipment to be installed at PANA Central Headquarters in Dakar, as well as in its regional offices, in Lagos, Kinshasa, Khartoum, Lusaka and Tripoli.

The technical committee will also review the needs expressed by national news agencies requesting assistance for necessary equipment to ensure the transmission of their news to PANA pool regional headquarters when the agency starts its operations.

CSO: 5500/9

JAPANESE AID FRENCH, SWEDISH SATELLITES

Paris LES ECHOS in French 6 Sep 82 p 9

[Unsigned article]

[Text] The Japanese electrical company, Mitsubishi, has just received two contracts representing 14 million dollars, to supply ground station equipment to the organization for the European telecommunications satellite (Eutelsat), and to the Swedish Telecommunications Administration (STA).

According to Mitsubishi spokesmen, the contract with Eutelsat covers the design, fabrication, and installation of high performance TDMA (time division multiple access) communications equipment for the Fucino (Italy) and Guadalajara (Spain) stations.

The launching of an European communications satellite is expected next year. According to the Japanese company, the equipment supplied by Mitsubishi should be placed in operation in 1984.

11,023
CSO: 5500/2355

FIRM DEVELOPS COMPUTER-DATA PHONE WITH BUILT-IN TELEPRINTER

Copenhagen BERLINGSKE TIDENDE in Danish 8 Sep 82 Sect III p 1

[Text] A telephone with a built-in teleprinter which gives the current exchange rates and security prices was one of the new products presented at the opening of the HI Fair [Handicrafts and Industrial Fair] in the Herning Halls yesterday.

The computer-data telephone has been developed by the Jutland Telephone Company, Inc., and is marketed through the Private Bank, whose foreign exchange department the computer-data phones are connected with. The computer-data telephones may be used by, among others, potential customers of medium-sized enterprises who need to follow the fluctuations in exchange rates and security prices.

So far 50 computer-data phones have been sold in Denmark, but there are indications that more computer-data phones will be sold. For, during the first 3 hours of the fair, another 3 computer-data phones were sold. In addition to the dry figures, the phone may also supply comments on, and background information to, the fluctuations in exchange rates and security prices. If any major fluctuations should occur in security prices or exchange rates, the enterprise concerned may immediately pick up the receiver, call the bank, asking it to start buying or selling.

The HI Fair, which is one of the largest fairs in Scandinavia within the building and construction sector, was at its opening met with pessimism in respect of the future of the building and construction industry. Representatives of the Council of Handicrafts and the Association of Building Contractors expect the crisis within the building and construction industry to develop into a disaster of bankruptcies and high unemployment rates.

Erik Teilmann, Bank Officer Authorized to Sign on Behalf of the Private Bank, tests the newly developed computer-data phone

7262
CSO: 5500/2349

THIRD STAGE OF ARIANE ROCKET FAILS, TWO SATELLITES LOST

Possible Consequences

Paris LE MONDE in French 11 Sep 82 pp 1, 10

[Article by Jean-Francois Augereau: "The Ariane Failure"]

[Text] The first commercial flight of the European rocket Ariane was a failure. Ten minutes after blasting off from the Kourou (Guyana) Space Center at 0412 hours (French time) on 10 September, a still unexplained malfunction caused the rocket's third stage to fail. The rocket and its two satellites were destroyed shortly thereafter.

The Ministry of Research and Industry issued a statement Friday morning saying that "The telemetry data at the Natal (Brazil) station must be analyzed to determine the cause of the failure" and that "Of course, the Ariane program continues." At the ESA [European Space Agency], Mr Michel Bignier, manager of space transport systems, expressed concern, above all, regarding the delay this could mean with respect to forthcoming launches.

A Serious Setback

The European space effort has suffered a serious setback with the failure of the Ariane rocket's first commercial flight. For the second time in five flights--Ariane had already exploded in flight during its second test launch--the European launcher has failed to accomplish its mission and placed its backers in an unenviable position at the very moment it was beginning to breach the monopoly the Americans have held, for many long years, in this domain.

It is a severe setback in the sense that the duration of the investigation, to determine the exact causes of the failure of the rocket's third stage, will probably upset, once again, the schedule of forthcoming launches. It is, in fact, reasonable to doubt that the next launch will be able to take place in November as presently scheduled.

But most importantly, the question is "How are those responsible for the program, who were already walking a tightrope even before 10 September, going to be able to efface these many mishaps. Ariane's first commercial flight had already been delayed by almost 5 months beyond its originally scheduled date of 23 April. Of course, this delay in the launching was not owing to any problem with the launcher, but rather to the modifications that had to be made to one of the satellites it was carrying up yesterday.

It is a financial setback as well, the more so in that a technical investigation is always costly.

The expenses involved in the present instance will have to be added to the developmental cost of the launcher--5,010 million francs based on the economic conditions of July 1981--which the Europeans had, as a point of pride and justly so, kept within its original budgetary envelope. What is more, besides paying to know why, profits and losses will have to be charged not only with the 180 million francs representing the cost of the lost launcher, but also with the 150-160 million francs representing the developmental cost of the scientific and technical satellite SIRIO-2, plus the cost of the maritime telecommunications satellite MARECS-B whose lost opportunity to do business is only partially covered by the $20-million insurance policy taken out prior to the launch.

The final tab will be even higher, since the MARECS-B satellite, whose orbiting was being anxiously awaited, was to be used entirely for commercial purposes. Once in place, it was actually to be integrated into the maritime satellite telecommunications system of INMARSAT [International Maritime Satellite Telecommunications Organization]. INMARSAT had planned, by means of an array of six satellites--three INTELSAT-5's, one Comsat General Corporation MARISAT satellite, and the two European satellites MARECS A and B--to make it possible for ships at sea, crossing the Atlantic, Pacific or Indian Oceans, to communicate directly with land by telephone or telex by simply dialing the subscriber's number, but also to rapidly relay search and rescue messages from any ship to shore.

The absence of MARECS B from its position east of Australia will--for these reasons and even though, according to INMARSAT officials, this will not disrupt services--translate for the ESA as a substantial loss of opportunity to do business, depriving it of all but a part of the $13 million of planned revenue from the leasing of the two MARECS satellites.(1)

Entitled To a Failure

In sum, it is an economic setback for Europe's space effort, insofar as the credibility of its launcher has been somewhat shaken. The satellite owners are, of course, pragmatic people and know perfectly well the risks of the business. It is therefore reasonable to suppose that the Arianespace company, the marketer of the launcher, will not suffer any defections from its bulging roster of launch bookings, totaling around 3 billion francs. On the other hand, however, potential clients who were on the verge of booking with Arianespace will probably postpone the signing of their contracts, to say nothing of the possibility of their turning once again toward the United States.

---

(1) The first MARECS flight model, stationed over the Atlantic, encountered some operational problems that have now been resolved. Since March, MARECS A has again been operating normally. But modifications had to be made to MARECS B to avoid similar problems. This took several months and explains the postponement of Ariane's first commercial flight to September.

To speak of such an outcome as regrettable, after the marketing success the Europeans had reached in their effort to crack the American monopoly on satellite launching services, is putting it mildly. True, it was a modest success, considering the potential of the market as a whole. In a way, however, the bet had been won; as witness, the contracts that had been signed with Arianespace by three American firms: Southern Pacific, Western Union and GTE.

These successes, however, have, to a certain extent, been wiped out by last night's failure. It can always be argued that Ariane is only now experiencing its debut and that, from this viewpoint, she is entitled to a failure. This is entirely true and, in the past, certain conventional American rockets, being held up today as an example, have experienced a much higher rate of malfunctions than has Ariane, which has functioned perfectly three times. This excuse, however, bears up poorly in a marketing context, where the only thing that counts is results, and the more so since, as of today, and despite the errors committed by it in the past--strategic, technical and financial--the competition, with its conventional Thor Delta launcher as well as its space shuttle, has chalked up an impressive number of successful launches.

What, then, is to be done at this point, knowing that, 2 months from now, the shuttle is scheduled to make its first commercial flight? Work and work fast toward a new success to restore the lost luster to the fortunes of Ariane, which, it must be agreed, had earned her honors from the technical standpoint as well as the financial one, thanks to her lower launching costs than those of her American competitors. There is, however, a subtle aspect that must be faced, in that, owing to yesterday's failure, Ariane's forthcoming commercial flight and the one that succeeds it will, to a certain extent, also be test flights, insofar as the SYLDA double-launching system (LE MONDE, 9 June 1982), on which the future profitability of the launcher rests, has yet to be flight tested.

[Boxed insert follows]:

A 'Near Perfect' Launch

It was just as the technical experts were beginning to believe it had been a "faultless" launch that something happened causing it to fail. What, in fact, did happen? It would be Friday night, at the earliest, before this could be known--not before the first analyses of the magnetic tapes that had been recorded at the Natal (Brazil) station and that would have to be brought to Kourou by plane. These magnetic tapes would enable the nature of the malfunction to be determined: A fault in the third stage engine, or a malfunction in the guidance system, or even the outright breakdown of an electronic component.

Before that, the chronology, as the technicians call it, had been perfect. At the appointed time--0412 hours, French time--the first stage was fired up. It behaved perfectly, as did also the second stage; ejection of the fairing and separation from the third stage took place normally. For 4 minutes, the third stage functioned well. At this point, 10 minutes of flight had elapsed, the launcher was beyond the range of Kourou's radars, and the telemetering signals transmitted continuously by the launcher were being recorded at Natal. It appeared then that the launcher was not following its trajectory and was losing altitude. Two minutes later, the American station installed on the mid-Atlantic British island of Ascension was to take over from Natal. Ascension did in fact "acquire" Ariane for a few seconds and verified that the launcher was far off of its normal trajectory. It then lost the launcher, whose third stage and the two satellites it was carrying disintegrated in the upper atmosphere.

Reason For Failure

Paris LE MATIN in French 13 Sep 82 p 15

> [Text] It was the malfunction of the fuel turbopump that feeds the third stage's engine that caused, on Friday, the failure of the Ariane rocket's first commercial flight and the loss of the two satellites MARECS B and SIRIO-2. The technicians of the Kourou Space Center in Guyana have determined the reason for the mishap in record time. It remains now to determine the exact cause of the malfunction and to then modify the faulty component. The immediate consequence of this will be to delay --possibly to January--Ariane's sixth launch. Beyond this scheduling problem, the officials of the Ariane mission are confident that this failure will not compromise the commercial future of the European rocket.

Things did not drag. Less than 24 hours after the failure of Ariane's fifth launch, the general manager of the CNES [National Center for Space Studies], Frederic d'Allest, was able to state, in a press conference held at Kourou on Saturday, that the mishap originated in the malfunction of the turbopump that feeds liquid oxygen and liquid hydrogen to the cryogenic engine of the launcher's third stage.

To localize this faulty component, some 100 technicians, divided into several working groups, had to systematically process the telemetry data that had been recorded by the Natal station in Brazil and sent by plane to Kourou early Saturday afternoon. One by one, the various on-board equipments and the various functions were eliminated as the cause. Then, the group charged with studying the operation of the third stage detected, at H hour + 561 seconds, that is, 4 minutes 23 seconds after ignition of the stage's engine, "a drop in speed of the turbine, followed by a pressure drop inside the engine's combustion chamber."

Since the fuel tank and pressurization system pressures were correct, the technicians concluded that the source of the propulsion dropout could only be in the turbopump that injects the propellants (liquid hydrogen and liquid oxygen) into the cryogenic engine.

It remains now to determine why the injection system failed... This turbopump," explained Mr Moulaert, chief of the Ariane mission, "is to the rocket somewhat as the crankshaft is to your automobile. Now, even in the best of automobiles, the crankshaft can give way. A tiny flaw, a cleft in the steel, and the piece breaks without warning. For the moment we can only hypothesize." And these hypotheses will have to be checked, in France, by the experts of the CNES and of the SEP [European Propellant Company], which builds engines and turbopumps at Vernon.

A fault, involving gearing breakdowns, had already been found in this type of turbopump during the rocket assembly and test phases. But it was corrected and there is no reason to assume that Ariane 5 was the victim of such a breakdown.

"Considering the volume and quality of available data, the diagnosis and any eventually needed modification of the turbopump should not take too long," Frederic d'Allest emphasized.

The next launch, which had been scheduled for 23 November, will, in the prevailing opinion at Kourou and under the best of circumstances, not be able to take place until next January.

Beyond merely upsetting a heavily loaded schedule, what can be the consequences of this failure of the first commercial flight? "This kind of mishap is extremely troublesome," commented Frederic d'Allest, "but not abnormal at this stage in our program. We feel that the potential users of Ariane will retain their confidence in us." And, in a communique, the minister of research and industry, Jean-Pierre Chevenement, stated that this failure "will in no way put to question again the rocket's capability," adding that "Ariane has spun a robust thread that will not be broken, for, it is that of our technological, economic and cultural independence."

Feigned optimism? Perhaps not. Present on Friday at Kourou, Olof Lundberg, general manager of INMARSAT [International Maritime Satellite Telecommunications Organization]--for the account of which Ariane was to have orbited the MARECS B satellite--reasserted: "We need competition in the realm of satellite launchers." Apparently, therefore, nothing has been lost, even though Friday's "miscarriage" may complicate negotiations between Arianespace and those potential clients who were lured by Ariane's initial performances...

Launch Calendar Before Failure

Paris LE MATIN in French 11 Sep 82 p 30

[Excerpt] Following is the calendar of Ariane's next 20 launchings between now and year-end of 1985. This calendar may be altered because of the failure of the fifth launch. The resultant delays will depend on the cause of the failure, which is still unknown, not to mention possible loss of optioned bookings beyond August 1985. Nine of the Ariane rocket's 20 booked launchings are to be carried out by means of the SYLDA [Ariane Double Launch System] developed by SNIAS [National Industrial Aerospace Company] which enables the simultaneous launching of two satellites: The SYLDA was to be tested for the first time with the putting into orbit of the MARECS B and SIRIO-2 satellites.

Calendar of Ariane Launchings Before Failure

Date	(1) N° de lancement	Satellites	Nation	Mission
(2) FERMES				
Nov. 82	L6	*Exosat*	ESA	Astronomie
Jan. 83	L7	*ECS 1* + *ASCAR 9* (3) (lancement double)	ESA	Télécommunications Radios
Mars 83	L8	*Intelsat-5* 1er vol (4)		Communications
Mai 83	L9	*Intelsat-5* 2e vol (4)		Communications
Juil. 83 (14)	L10	*ECS 2* + *Telecom-1* ou (5) *Intelsat-5*	ESA France	Communications
Oct. 83	L11	*Intelsat-5* 3e vol (4) + *ECS 2* ou *Telecom-1*	ESA France	Télécommunications
Déc. 83	L12	*Westar* *Spacenet 1*	E.-U. (6) E.-U.	Télécommunications
Fév. 84	L13	+ *Arabsat 1* ou (5) *Telecom 1-B*	Arabe France	Télécomunications
Mai 84	L14	*G Star N° 1* + *Telecom 1-B* ou (5) *Arabsat*	E.-U. (6) France Ligue arabe (7)	Télécommunications
Août 84 (13)	L15	G Star N° 2 + *Spacenet N° 2*	E.-U. (6) E.-U.	Télécommunications
Oct. 84	L16	*Spot 1* + *Viking* (12)	France Suède	Observation de la Terre (8)
Déc. 84	Créneau libre (9)			
Fév. 85	L17	*SBTS N° 1* + *Spacenet* ou (5) *ECS 3*	Brésil (10) E.-U. (6)	Télécommunications
Mars 85	L18	*Intelsat 5 A*		Communications
Mai 85	L19	*TV Sat* (11)	RFA	Télévision
Juin 85	L20	*Intelsat 5-A* ou (5) *TDF-1*	France	Télévision directe
Jui. 85 (14)	L21	*Giotto* + *STC 1* (6)	ESA E.-U.	(15) Survol comète Haley Télévision directe
OPTION				
Août 85 (13)	L22	*Aussat*	Australie	Communications
Sept. 85	L23	*TDF-1* (5) ou *Intelsat-5-A*	France	Télévision directe
Sept. 85	L24	*ARIANE 4*	ESA	(16) Premier vol
Déc. 85		*Aussat* L25	Australie + *Anik-B*	Communications Canada

Key:

1. Launch Number.
2. Firm Bookings.
3. Double launching.
4. Vol=Flight.
5. Ou=Or.
6. E.U.=United States.
7. Arab League.
8. Earth Observation.
9. Open slot.
10. Brazil.
11. Federal Republic of Germany.
12. Sweden.
13. August.
14. July.
15. Flyby of Haley Comet.
16. First flight.

9399
CSO: 5500/2354

NATION TO SEEK 15 PERCENT OF WORLD TELEMATICS MARKET

Paris LES ECHOS in French 31 Aug 82 p 4

[A-ticle by J. J.]

[Text] France is resolutely pursuing the telematics path. Louis Mexandeau has taken stock and found telecommunications electronics to be a potentially very lucrative contribution to France's trade balance and industry.

The national technology will thus be found in the air and on land to cover all wavelengths. The first TDF-1 satellite should be launched during the summer of 1985, after an investment of 1.27 billion francs, as the PTT minister stated in his answer to a written question from Deputy Michel Noir (Rally for the Republic, Rhone).

This could lead to a world market for direct broadcast satellites estimated at about 15-18 billion francs in 1990, from which France expects to draw 2.0-2.5 billion francs for its European cooperation activities.

Same determination for cable television and data transmission, particularly using optic fiber technology, which makes it possible to send hundreds of communications through a fiber the size of a hair.

The first volunteer users in the cable-equipped town of Biarritz will be connected in mid-1982. The operation will cost a total of 500 million francs. This activity is considered to amount to several billion dollars on the world market in 1990.

The objective for the French industry is to capture 15 percent of sales, which means a business volume of some 10 billion francs at the least.

Who Will "Liberate" the Airwaves?

But how will the French be able to choose between satellite and cable, since the government, through the PTT minister, has undertaken the obligation to offer two possibilities to users, when the television satellites begin operations? Louis Mexandeau, aside from policy, suggests an economic answer. A parabolic direct reception antenna, would cost between 2365 and 4180 francs in 1982, depending on the geometric angle between the building involved and the satellite.

A share in a community television cable network would be a minimum of 1925 francs, and could reach 3850 francs, depending on distance.

The differences appear surprising at first sight, since various experts had indicated that cable television, called teledistribution by specialists, would be much less costly than satellite television. But PTT hastens to point out that a community network would offer many more services than a direct reception antenna.

Among other things, Louis Mexandeau talks of local and regional or interactive services, which can be connected to cable. After local radio, the time will have arrived for regional television; but while the transmission technology is already available, no political decision has been reached about program content or about who will have the right to "liberate" the airwaves.

The question is still open, independently of whether it applies to a local scale or to the airwaves, with the fourth or fifth channels offered by the satellites.

11,023
CSO: 5500/2355

PTT SEEKS TO SPREAD TELEMATICS USE THROUGHOUT NATION

Paris LES ECHOS in French 7 Sep 82 p 22

[Article by Gerard Larpent]

[Text] From our correspondent in Aquitaine. Despite the belt tightening policy adopted by the government, Louis Mexandeau, PTT minister, is not too worried about his own budget. That is what he indicated on Monday in Bordeaux, at the opening of the 21st European Meeting of Telecommunications Engineers, which will continue until 11 September.

The 142 billion-franc telecommunications budget is the country's third largest, and the largest for civilian investments; it devotes 28 billion francs to investments during this year, and should receive an equivalent amount next year (on the order of 28-30 billion francs). Together with telematics activities as a matter of course, the completion of switching center equipment, and the continuation of the telephone equipment programs, which Mr Mexandeau expects to be finished in 1985, will be the major projects in this category.

The minister points out that in 1981 the budget stipulated the installation of 300,000 Minitel (electronic telephone directory) terminals. The same number of terminals was included in the 1982 budget, and Mr Mexandeau believes that the same figure should be expected for 1983, by which time the total number will come close to one million units. The development of this technology should be accelerating, to achieve a complete "telematics irrigation" of the country within 15 years.

The minister nevertheless stated that unlike his predecessors, he did not intend to impose this technology, but rather call upon volunteer participation. And experience has shown that demand is already very strong under these conditions, since in Ille-et-Vilaine more than 50 percent of the private subscribers expressed their desire to be provided with a telematics directory.

After Picardie, Nord-Pas-de-Calais and other regions, such as Aquitaine in July, stated that they wanted to receive this equipment; to such an extent, that the minister believes priorities will probably have to be established. But just as systems of refundable deposits existed for telephone equipment, Mr Mexandeau expects that a similar contractual policy for telematics equipment could be formulated with the regions.

"But it would be regrettable," the minister adds, "if as a result of inertia, some regions continue to lag in their development." That is why he advocates a decentralized procedure which will make it possible to respond to smaller collectivities, or even professional groups, which would request telematics equipment.

11,023
CSO: 5500/2355

BRIEFS

CONTRACT WITH NORTH YEMEN--France and North Yemen have established a protocol for technical cooperation in telecommunications. According to this agreement, signed by the French PTT minister, Louis Mexandeau, and his North Yemen counterpart, Ahmed Al Anissy, North Yemen, which was the first country in the world to benefit from the French E-10 technology, will have its capabilities increased to 100,000 circuits in 1985; it has decided to purchase a new E-10 telephone exchange for Sanaa. During his visit, Mr Mexandeau also met with the North Yemen prime minister, Mr Al Iriani. [Text] [Paris LES ECHOS in French 6 Sep 82 p 9] 11,023

CSO: 5500/2355

INTRODUCTION OF OPTICAL FIBERS IN DISTRIBUTION NETWORK

Turin ELETTRONICA E TELECOMUNICAZIONI in Italian May-Jun 82 pp 92-96

[Article by U. De Julio, F. Lombardi and R. Pietroiusti*]

[Text] Summary--Optical fiber introdution in the distribution network. The recent development and improvement of optical fibers and optoelectronic technology has suggested the possibility of introducing optical transmission systems in the distribution network. This paper presents a short analysis of the possible evolution of the distribution network and the expected requirements in terms of transmission capacity. Then, the main characteristics and performance of optical fibers and systems suitable for the subscriber network are discussed. On the basis of preliminary cost considerations, a widespread diffusion of optical fibers in this area of the network requires substantial reductions of fiber, cable and installation cost.

1. Introduction

The first field experiment with optical fibers in Italy goes back to 1976. Since that time, various other experiments have been conducted with the purpose of testing various techniques for the laying and joining of optical cables, checking the stability of the fibers in the cables laid and the performance characteristics of the digital-transmission systems at the various frequencies, up to 140 Mbit/s (Bibliography 1).

Until now, these experiments have been done only on the junction network between exchanges, for the purpose of comparing, from a technical-economic point of view, the optical cables with the traditional ones--that is, with coaxial-pair cables of 0.7/2.9 mm and 1.2/4.4 mm.

The results available have already demonstrated the suitability of the optical transmission systems in urban junctions and in short-distance interurban connections without intermediate repeaters with remote power supply.

The last experiment (started at the end of 1980) consists in an aerial optical cable to be used in the sector area with 2,048- and 8,448-Mbit/s digital systems.

---

* Engineer Umberto De Julio, Engineer Franco Lombardi, Engineer Romolo Pietroiusti of the SIP - Rome. Manuscript received 27 January 1982.

At the same time, a great deal of attention has been directed toward the distribution network that connects the users to the local exchanges. This part of the network, which at present is completely analog and is used almost exclusively for telephone subscribers, will in the coming years undergo a gradual and profound change, for the following principal reasons:

I--the introduction of digital techniques, which suggests distribution-network structures different from the present ones.

Today, indeed, almost all subscribers are connected directly, with dedicated circuits, to their relative local exchanges, which fulfill the functions of concentration and switching. Typically, these circuits are composed of symmetrical pairs with diameter of 0.4 and 0.6 mm, and have an average length of about 1.7 km and maximum length of about 5 km.

With the use of digital techniques, it may prove appropriate to increase the average distance between the subscribers and their exchanges by using intermediate digital multipliers or concentrators of reduced capacity (from a few 10's to a very few hundred subscribers);

II--the present studies and developments of the Integrated Service Digital Network (ISDN) look forward, in addition to digital circuits for telephone subscribers only, to digital circuits at 80 (64 + 16) kbit/s and 144 (2 X 64 + 16) kbit/s for multiservice subscribers.

In the present distribution network, there are many factors that limit the repetition pitch obtainable at these frequencies--for example, the considerable diaphony between lines, the impulse noise, the presence of branches in parallel, the presence of other types of systems and signals;

III--the anticipated demand for access to wide-band networks. In this category are digital access to the frequencies of, for example, 2,048 kbit/s for private exchanges (PABX) and access to wide-band video services in analog form (with 5-MHz or 1-MHz standard) or in digital form (2,048 kbit/s).

For these applications also, the present distribution network would not provide satisfactory performance characteristics in terms of repetition pitch and transmission quality and would require, in most cases, the ad-hoc laying of cables.

The introduction of optical fibers could solve the greater part of the technical problems deriving from the evolution of the subscriber network and would at the same time offer sufficient transmission capacity to meet the further increase in the demand for services.

On the other hand, the current costs of optical cables and components make the use of optical systems in this area of the network impracticable in many cases. Such use would be justified today only in cases in which it is strictly necessary on account of transmission requirements, as could happen for the applications discussed earlier in point III.

This derives largely from the fact that many of the technical solutions presently available for optical fibers, cables and components have been planned and optimized for the interurban and junction networks. It should be kept in mind, however, that more economical solutions can be identified, meeting the less rigorous technical requirements of applications in the distribution network.

In what follows, after brief analysis of the transmission-capacity needs foreseeable in the evolution of the distribution network, the principal characteristics and performance of the optical fibers and the systems suitable for the network in question are discussed.

Finally, several economic considerations for verifying the present possibility of a gradual introduction of optical fibers are developed.

2. Transmission Capacities Necessary in the Evolution of the Distribution Network

The present structure of the subscriber junction system is illustrated in Figure 1. It is divided into three parts: the primary network, between the local exchange and the distribution turning sections (PCCP = Primary Cross Connection Point); the secondary network, between the distribution turning sections and the subscriber boxes (CDP = Customer Distribution Point); and the subscriber loop.

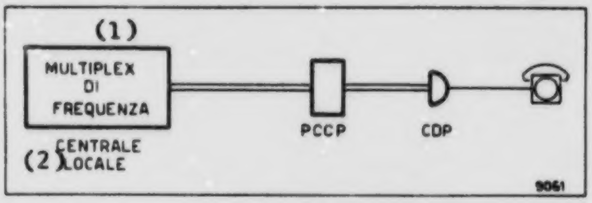


Figure 1. Structure of the existing distribution network

Key:
1. Frequency multiplex   2. Local exchange

The diameters are prevalently 0.4 mm in the primary network and 0.6 mm in the secondary network. In addition to the telephone signal, these junctions currently transmit data in the phonic band, data in the baseband up to 64 kbit/s, line radio (six monophonic channels in the 163-358 kHz band), teletex (12 kHz) and High-Frequency Telephonic Monochannel (MTAF, 28 kHz and 76 kHz).

In future, the transmission systems for the distribution network will have to be able to offer the following capacities (see Figure 2):

A--80 and 144 kbit/s, which are the capacities provided for the multiservice-subscribers' base access to the ISDN [Integrated Service Data Network] and correspond to, respectively, one and two 64-kbit/s channels for digital telephony and for other circuit-switching services, plus a 16-kbit/s channel for signaling, packet-switching services, burglar alarms, etc. The 144-kbit/s capacity represents the best solution for the long term, while for the medium term, the 80-kbit/s capacity proves the most suitable solution for the limitations of the present subscriber junctions.

B--512 or 704 kbit/s, which are the capacities for the PCM (Pulse Code Modulation) systems at intermediate cipher frequency to be used for the digital PABX's and for connections of low transmission capacity (respectively, 8 or 11 64-kbit/s channels).

C, E--2,048 kbit/s, which corresponds to the capacity of a primary PCM multiplex in the Europe hierarchy; the systems with this capacity should be used in the distribution network both for connections all the way to the subscriber (case C) and for connections between distant multipliers or concentrators and the local exchanges (case E).

D--5 MHz, which is the overall bandwidth for the standard 625-line video signal.

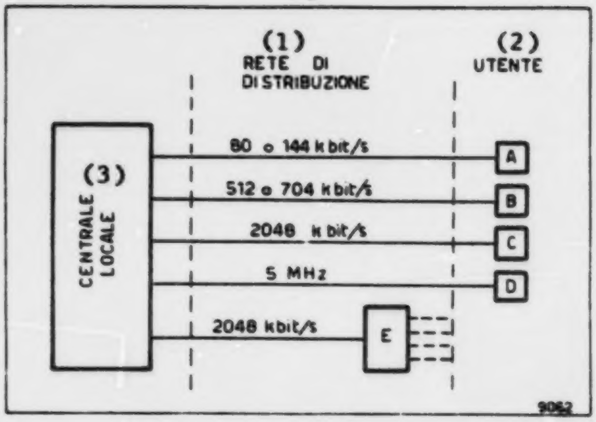


Figure 2. Different types of signals in the future distribution network

Key:
1. Distribution network 2. Subscriber 3. Local exchange

As regards transmission of video signals in the subscriber network, taking the aforementioned capacities into account, it is possible to outline three prospects:

I-- transmission in digital form with reduced image frequency and codification with one or more 64-kbit/s channels (the "videoloento" systems);

II-- transmission in digital form and codification at 2,048 kbit/s, which can be considered the "digital equivalent" of the 1-MHz standard for applications of the videolento or videoconference type;

III--transmission of the standard video signal in analog form, with analog-to-digital conversion at the centralized points of the network and subsequent digital transmission in the interurban network.

(In the present article, monodirectional distribution to the TV-channel users is not taken into consideration.)

The present distribution network is poorly adapted to transmission of the abovementioned cipher frequencies and bandwidths, both on account of the intrinsic transmission capacities of the symmetrical-pair cables and because of the presence of irregularities and disturbances of various kinds. These problems are discussed in detail in Bibliography 2, in which 80-kbit/s digital transmission on the current subscriber junction systems is examined, while in the following section, the principal characteristics and performance of the optical-fiber transmission systems are analyzed.

3. Optical-Fiber Transmission Systems

Optical systems for transmission of digital signals at 80, 144, 512, 704 and 2,048 kbit/s and for transmission of analog signals at 1 and 5 MHz are considered.

3.1. Digital Transmission

For cipher frequencies up to 704 kbit/s, the use of a single fiber for both transmission directions is planned, using the time-division (TD) and wavelength-division multiplexing (WDM) techniques.

In the case of cipher frequency equal to 2,048 kbit/s, both the use of one fiber for each transmission direction and the use of a single fiber and transmission by the WDM technique have been considered.

The aforesaid cipher frequencies correspond to net capacities, and thus the frequencies effectively transmitted (symbol frequencies) have to be increased slightly so as to include a suitable additional service capacity.

Such additional capacity has not been considered in the case of 2,048 kbit/s because it was hypothesized that such a frequency results from a normal raster structure.

Table 1 presents the symbol frequencies adopted (before line codification) for the various net-cipher freuqncies and for the two transmission techniques considered.

Table 1--Symbol Frequencies (kbit/s) for Bidirectional Transmission with the TD and WDM Techniques on a Single Fiber

	Transmission Technique	
Net Cipher Frequency	TD	WDM
80	256	88
144	480	152
512	1,704	576
704	2,344	768

Figure 3 shows permitted fiber attenuation α (dB/km) in function of repetition ptich l (km) at the different cipher frequencies.

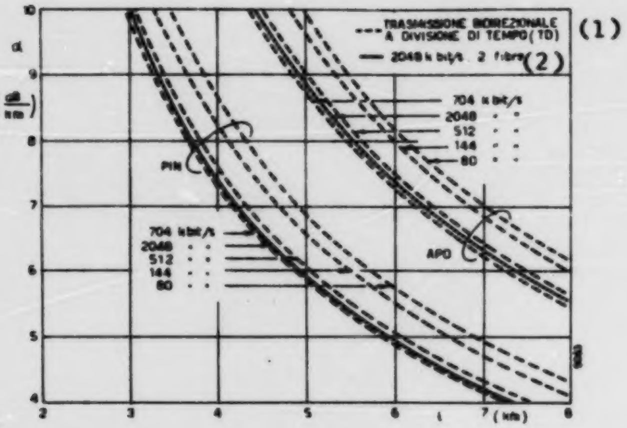


Figure 3. Fiber attenuation α permitted in function of repetition pitch 1, for digital transmission

Key:

1. Time-Division (TD) Bidirectional Transmission 2. Fibers

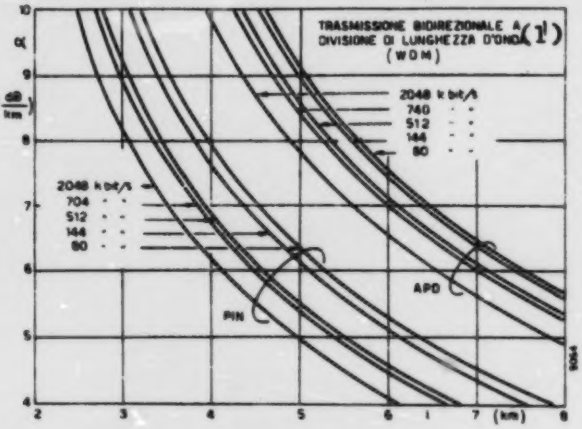


Figure 4. Fiber attenuation α permitted in function of repetition pitch 1 for WDM digital transmission

Key:

1. Wavelength-Division Modulation (WDM) Bidirectional Transmission

---

The broken-line curves refer to the systems with single fiber and TD transmission technique, and the solid-line curves to the 2,048-kbit/s system with two fibers.

The curves were obtained on the suppositions of a CMI (Code Mark Inversion) line code, a mean coupled power in the fiber equal to -10 dBm, and a sum of the losses in the splices and connectors and the system and installation margins equal to 12 dB.

For use as detector, both a PIN (P-positive, I-intrinsic, N-negative doped-silicon detector) and an APD (Avalanche Photo Diode), with high-impedance conventional preamplifier, were considered.

From Figure 3 it can be deduced that by use of low-quality fibers--for example, α = 7 dB/km--it is possible, at 2,048 kbit/s, to cover distances longer than 4 and 6 km, respectively, with PIN and PAD.

For the 80-kbit/s cipher frequencies and using a single fiber for both transmission directions, these distances become about 5 km and 7 km.

It can be noted that that the influence of the cipher frequency on the repetition pitch is far lower than in transmission with metal cable. This is due both to the fact that these frequencies are very low vis-a-vis the bandwidths of the fiber, even if low-quality fibers are used (for example, 40-50 MHz/km), and to the fact that for cipher frequencies that are so low, the quantum-noise effect on the sensitivity of the receiver increases.

Figure 4 presents the results obtained in the case of bidirectional transmission on a single fiber using the WDM technique. In this case, a further loss of 5 dB has been taken into account, comprising the insertion losses of the optical coupling devices and the effects of diaphony.

3.2. Analog Transmission

Analog transmission of video signals in the distribution network could be preferred to digital transmission since it makes it possible to concentrate the analog-to-digital converters, which are still very expensive, at convenient points in the network.

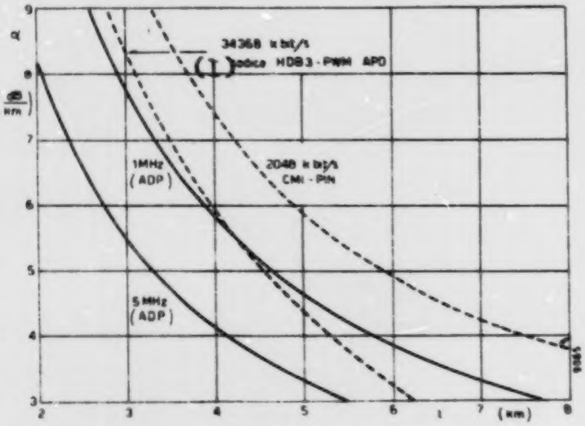


Figure 5. Fiber attenuation α permitted in function of repetition pitch for analog (solid lines) and digital (broken lines) transmission. (PWM = Pulse Width Modulation)

Key:

1. Code

There are many methods for modulating the light emitted by an optical source by means of an analog signal; the most suitable is Direct Intensity Modulation (DIM) of the light. One disadvantage with DIM modulation lies in the nonlinear characteristics of the LED (Light-Emitting Diode), whose effects--expressed, for example, in terms of differential gain and phase--influence transmission quality.

Normally, with the sources available on the market, one can obtain differential gain and phase values that are compatible with good transmission quality only with relatively low modulation indexes.

The continuous curves of Figure 5 illustrate the fiber attenuation α permitted (dB/km) in function of repetition pitch l (km) for an APD detector.

In addition to transmission of the 5-MHz band, transmission of the 1-MHz band, which corresponds to the other possible standard for videotelephone and videoconference, was considered also. The differential phase and gain values for transmission of the 5-MHz band prove to be, respectively, 9.4 percent and 5°; the unweighted signal-to-noise ratio is 44.6 dB for both bands, which for the 5-MHz band corresponds to a weighted signal-to-noise ratio of 52 dB; and the total loss in the connectors and splices was assumed to be 6 dB.

In Figure 5 are shown (broken lines) also the fiber attenuations permitted at the cipher frequencies of 34,368 and 2,048 Mbit/s, which can be considered, respectively, the digital equivalent of 5 MHz and 1 MHz.

It can be noted that with appropriate selection of fiber attenuation, it is possible to cover all the distances involved in the distribution network; in any case, with a fiber having attenuation of 7 dB/km, it is possible to cover the major part of the present connections.

Finally, it should be noted that the optical technologies offer a simple way--the WDM method--of combining different signals, analog and digital, in the same fiber.

An interesting application of this technique can be simultaneous videoanalog (for example, 5 MHz) and digital (for example, 80 kbit/s) transmission.

4. Optical Components

Examining the characteristics of the optical sources, fibers and detectors, particular attention has to be devoted to their costs and to the simplicity of the systems, these being essential elements for satisfactory use of the fibers in the subscriber network.

The sources available are the Light-Emitting Diodes (LED's), the Super-Luminescent Diodes (SLD's) and the Laser Diodes (LD's). The LED's seem to be the most appropriate sources in that they fill better than the others the requirements of reliability, cost and simplicity of the control circuits; in addition, they have an adequate emitted power for the frequencies and distances involved.

The light power that can be coupled in a fiber with diameter of 80 μm and numerical aperture (NA) of 0.3 falls between 100 and 150 μW.

The working wavelength should be comprised within the field of 800-900 mm (I window), since the use of longer wavelengths (II or III window) would imply more expensive fibers and components.

As regards the type of fiber, it is possible to use both those of the index-of-refraction step type and those of the graduated-index type; however, the graduated-index fibers offer wider bandwidths, and use of them would therefore make it possible to cope eventually with growing traffic exigencies and increase in demand for services. In such case, adaptation of the network to the altered requirements could be achieved simply by changing the terminal sets at the user end and in the local exchanges.

The choice of the fiber parameters is influenced by many factors. Generally speaking, the smaller the diameter of the core, the lower is the cost of the fiber; on the other hand, smaller cores imply greater losses in the splices, in the connectors and in the LED-fiber coupling. A good compromise between the cost of the fiber and the transmission performance characteristics is a fundamental point in the choice of the fiber to be used.

Taking into account the frequencies to be transmitted (up to 2,048 kbit/s) and the distance to be covered (4 to 5 km), a good choice could consist in fibers having a NA equal to 0.3, a bandwidth of 40 MHz X km, attenuation of 6 to 7 dB/km, and core diameter between 60 and 80 μm.

Naturally, for particular applications that involve longer connections and/or higher cipher frequencies, lower attenuations and wider bands could be required. In this regard, it should be noted that in order to handle the various necessities of the network and of the subscribers, fibers with different transmission characteristics can easily be combined in the same cable.

As regards the optical detector, both avalanche photodiodes (APD's) and PIN photodiodes can be used. The PIN solution is the more economical one inasmuch as it requires simpler circuits, and the corresponding power penalty as compared with the APD can be reduced by careful design of the first state of the reception amplifier (using, for example, an integrated PIN/FET [Field-Effect Transistor] module).

5. Preliminary Cost Considerations

The continual evolution of optical-cable technology makes it difficult to predict the future costs of the optical transmission systems or to make a sound economic comparison with the conventional systems. A preliminary comparison is made here, on the basis of two simple cases:

1-- 2,048-kbit/s transmission system for direct connection of subscribers to the exchange with symmetrical-pairs cable or with optical cable;

II--voice-frequency connection with metal cable for 30 telephone channels or 2,048-kbit/s transmission in optical cable by a multiplier close to the subscribers.

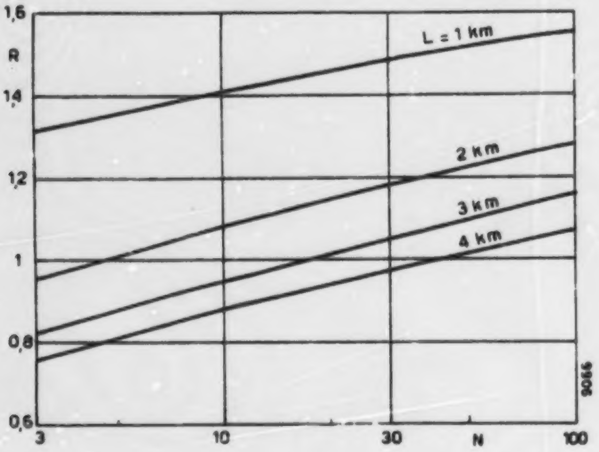


Figure 6. Comparison between 2-Mbit/s transmission in optical cable and in metal cable. R = total-cost ratio between optical system and system with N symmetrical pairs functioning at 2,048 kbit/s; L = length of connection

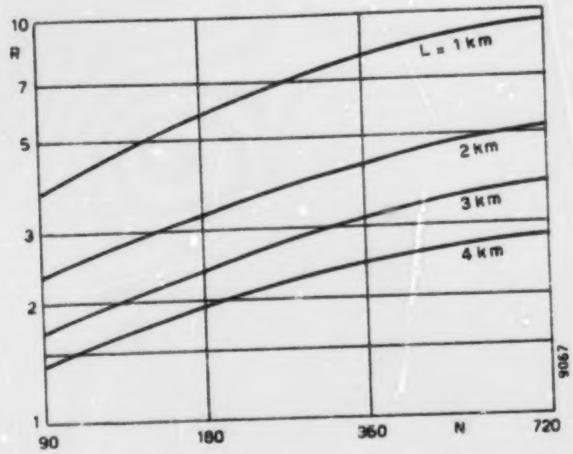


Figure 7. Comparison between 2,048-kbit/s transmission in optical cable and at voice frequencies in metal cable. R = total-cost ratio between 2,048-kbit/s optical system and 30 telephone channels at voice frequency in function of number N of subscribers; L - length of connection.

The costs of optical cables have been arrived at by hypothesizing appropriate reductions from the current ones on the basis of the trends and the experience that has so far developed in Italy. In particular, the cost of fiber was presumed to fall between $0.08 and $0.10 per meter, while a reduction of about 30 percent and 40 percent, respectively, was presumed for installation and cabling of the fiber.

Figure 6 presents the ratio R between the total cost of the optical systems and those of the symmetrical-pairs systems, in function of number N of the 2-Mbit/s systems and for various lengths L of the connection (case I). It can be noted that on the aforesaid hypothesis, transmission by optical fiber proves competitive for a low number of systems and for distances greater than 3 km.

Figure 7 presents the ratio R between the cost of the 2,048-kbit/s system in fiber and the total cost of the 30 telephone channels transmitted at voice frequency in function of the number N of subscribers and for various connection lengths L (case II). From the figure it is deduced that the optical transmission system is not competitive with voice-frequency transmission in pairs, and in the most favorable case, the fiber system proves about 50 to 60-percent more expensive.

From the economic comparisons made for the two simple situations described above, it can be concluded that optical fibers could effectively be used in the distribution network for high-capacity connections, while widespread use of them for telephone applications requires further reduction of costs and an improvement of the technologies.

6. Conclusions

Optical fibers represent an effective means of substantially improving the transmission capacity and the performance characteristics of the distribution network with a view to digitalization of the network and the growth of new services. Typical advantages of fibers are immunity to diaphonies and to external interferences, the small dimensions and lower weight of the cables, permitting more efficient use of the existing infrastructures (conduits, manholes, etc), and the feasibility of connections without intermediate repeaters, which simplifies the operation and maintenance of the installations.

The preliminary economic considerations show that even if the reasons for projecting widespread use of fibers are still not obvious, at least in a medium-term outlook, it is reasonable to foresee several more decisive phases in their introduction into the network, as in the case of connections for wide-band services or for connecting to the network new industrial or commercial areas where it is reasonable to expect a considerable percentage of multiservice users.

BIBLIOGRAPHY

1. Bonaventura, G., Costa, B., Cottatellucci, O., Daino, B., Esposto, F. and Lombardi, F., "COS3/FOSTER Field Trial with an Optical Cable in Rome," Sixth European Conference on Optical Communication, York, September 1980.

2. De Julio, U., Fausone, A. and Pellegrini, G., "Experiments of Digital Transmission in Subscriber Loops," International Conference on Communication, ICC '81, Denver, June 1981.

11267
CSO: 5500/2352

INTEGRATION OF SATELLITE SWITCHING SYSTEM WITH GROUND NETWORK

Turin ELETTRONICA E TELECOMUNICAZIONI in Italian May-Jun 82 pp 115-120

[Article by Roberto Preti, Salvatore De Padova and Antonio Puccio*]

[Text] Summary--Integration of a satellite switching system with the ground network. Satellite telecommunications systems are becoming attractive for regional and domestic applications where large economies of scale can be obtained. After a short review of some problems that arise on integration of a satellite system with these networks, it is discussed how large transmission capacity can be obtained by using a spot coverage plan at 20/30 GHz and on-board switching techniques. On-board switching concepts and relevant implementation technologies are presented. A satellite network configuration is proposed such that in the earth stations the buffer memories of TDMA [Time-Division Multiple Access] can provide switching capabilities. The functions of a master station and the problems of pathfinding are dicussed.

1. Introduction

Since 1965, the year of the placing of the Intelsat I telecommunications satellite in orbit, communications via satellite have continued to show a spectacular capacity for development.

The improvements gradually introduced, both in the on-board equipment and in the ground equipment, have brought about a drastic reduction in the cost of the connections. Consequently, the use of satellites for telecommunications, originally limited to international connections, has gradually come to involve the international and national networks.

A confirmation of this trend comes from the fact that an increasingly large number of telecommunications satellites has been developed, or announced, even by countries, such as those of Europe, of limited size and already provided with well-developed ground networks (Bibliography 1).

---

* Engineer Roberto Preti and Engineer Salvatore De Padova of the CSELT [Telecommunications Research and STudy Center, Turin); Engineer Antonio Puccio of Telespazio, Rome. Typescript received 22 March 1982. This paper was presented to the International Symposium on Switching (ISS) held in Montreal, Canada, in September 1981.

Use in the national framework may require that the stations work at a network characterized by a high number of relations with small traffic values, on the average, and therefore difficult to achieve by direct connections with any efficiency. It follows from this that the ground stations will have to provide for real switching functions and therefore process the signaling and route the calls in order to combine the traffic adequately.

In such way will it be possible to achieve the network via satellite with high efficiency, but it will also have to be integrated functionally with the ground network.

In what follows, several problems that arise in integration of the two networks will be examined, and several problems deriving from the presence of switching functions both in the ground stations and on board will be presented.

2. Integration with the Ground Network

One of the problems connected with the use of connections via satellite is the one deriving from the long signal-propagation time.

Indeed, the propagation time from subscriber to subscriber is about 300 ms in the case of transit via satellite, and when a double transit cannot be avoided, one jumps to about 600 ms.

The subscriber's sensitivity to the long propagation times and the influence of such times on connection quality have been the subject of study and experimentation since the first connections via satellite, and a large mass of data is available on it, obtained by means of questionnaires and observation of the difficulties present in the course of the conversation.

The data demonstrate that even such long propagation times do not by themselves cause serious difficulties; the subscriber's dissatisfaction derives rather from the echo phenomena and from the distortions introduced by the means for reducing them (suppressors). Especially in the case of double transit, when four echo suppressors may be present (indeed, it is not always possible to disconnect the two intermediate ones), the syllable-truncation phenomena prove rather annoying. However, except for these particular cases, the performance characteristics of the suppressors prove acceptable, at least until the network's evolution in the direction of widespread digitalization produces a considerable improvement in the quality of the channels (in terms of distortion, attenuation, signal-to-noise ratio, etc), and the echo phenomena, no longer masked by other disturbances, will become an element conditioning quality itself.

Considerable progress is expected from the echo cancellers, devices that eliminate the fork return without interrupting the channel backward; it follows from this that it is not necessary to incapacitate them during transmission of data in phonic band and of record signaling.

As regards signaling, it should be noted that while it is natural to expect the common-channel systems to come gradually to the fore (first, ICCTT [International Consultative Committee on Telephony and Telegraphy] No 7)--systems optimized both for telephony and for data--for a number of years, the system used in the European framework will still be of the multifrequency type. The R2 system, though not specified for use via satellite, has been shown to be validly usable (one confirmation has come from the experimentation carried out on the OTS [expansion unknown] and Symphonie satellites), and use of it has been accepted for the European ECS satellite.

A final note on the problems of synchronism. The national digital network is being set up with synchronous structure; in order for the runs via satellite to be able to constitute an integral part of them, they must present an interface free of creeps.

For this purpose, it is necessary to use suitable memories in the ground stations for compensating for the variations in propagation time due to the perfect geostationariness of the satellite's orbit, and it is necessary to hook up the satellite system's clock to the national master clock, thereby obtaining a theoretically synchronous interface.

Finally, it should be noted that in case of networks with plesiochronous structure, the stability of the satellite system's clock (10^{-11}) is such as to guarantee an interface with acceptable frequency creep.

3. On-Board Elaboration

The satellite is a common resource through which all the points on earth that are seen by the satellite itself can be interconnected. It was with this in mind that the first satellites were equipped with an antenna capable of illuminating the entire terrestrial surface seen by it (global-coverage satellites).

This solution, though simple from the technological point of view for the on-board satellites, presents disadvantages and limitations. In this way, indeed, power is also sent from the satellite to those zones of the earth not involved in the use of the satellite, with a resultant waste of power and therefore an increase in the on-board power required. Besides, with global coverage, a given radio carrier can be used a maximum of two times, using transmissions in orthogonal polarizations of the electromagnetic field, thus limiting the overall capacity available for a given radiofrequency band. The time-division multiple-access (TDMA) technique and the use of high frequencies (20/30 GHz) are auxiliary aids to the solution of these problems.

The overcoming of such problems can be achieved by illuminating the territory selectively by means of a set of coverages (spots), each limited to a small area around the ground stations.

Satellites of this type, equipped with multibeam antennas, optimize the use of the on-board power available and make it possible to reuse the same carrier frequency several times in appropriately disconnected spots.

In this way, though, several technical problems arise, in connection with the larger dimensions necessary for the satellite's on-board antennas and the interconnections between stations belonging to different areas.

The different areas have to be put into communication with one another by means of appropriate on-board devices. The most promising technique uses a coupler that periodically puts each access channel in communication with all the others; this is referred to as time-division multiple access with on-board switching (SS/TDMA) (Bibliography 3).

The on-board switching can be done on the radiofrequency signal or, in the case of regenerative satellites, on the baseband signal.

In that case, the signals received on board are demodulated (regenerated) and therefore can be switched with digital devices before remodulating the carrier to be transmitted.

On-board regeneration has several indisputable advantages, such as disconnection between the uplink and downlink transmissions, which permits independent optimization of the two runs, but in particular offers interesting prospects. Indeed, the presence of the signal on board in digital form, and thus already prepared for processing, opens up the possibility of the on-board equipment's carrying out completely new functions (error-correction, speed-conversion [Bibliography 4], packet-switching, etc), introducing new degrees of flexibility into the satellite network.

Evolution in this direction is severely limited at present by the weight and power limits that already make achievement of the simple switching function critical.

Indeed, an on-board switch is being developed with the restriction of not exceeding a few kilograms of weight and a few 10's of watts of absorption, with the whole obvisouly including the redundancies necessary for guaranteeing it a survival probability of at least 95 percent after 7 years of mission.

It is obvious that the technical solutions developed for the networks for connection to the ground network, with these restrictions taken into account, will not be usable in the near future; indeed, considering that the digital flows to be switched come at high speed (120-360 Mbit/s) and are organized in rather long strings (2 ms or more), any form of real-time on-board switching proves impracticable.*

Nevertheless, even by doing only space-division switching on board, which requires far simpler devices, a high degree of flexibility can be achieved by having the memories present in the ground stations cooperate with the on-board switch by means of a procedure that achieves (albeit with interstage connections of 35,000-km length) an articulated switching structure of the time-space-time (TST) type.

---

* However, the designing (for experimentation on the ground) of a switch with on-board string memorization (TST structure) is already in progress, as long-term research. The research is being conducted on a collaborative basis by Selenia, ITALTEL and the CSELT, on behalf of the ESA [European Space Agency].

4. Technology of the On-Board Switching System

4.1. Microwave Switching System

With the feasibility of a radiofrequency switching system verified by means of system studies and technological evaluations, development of the first prototype began in 1969 in the laboratories of Comsat. There has been considerable progress since that time, to the point that on-board switching is already planned for the sixth generation of Intelsat satellites (1986).

Comsat presently has a switch with characteristics very close to those required and weighing about 7 kg in the 16 X 16 version; it has absorption of about 5 watts and switching time around 50 ns (Bibliography 5).

The unit, of matrix-control type, is made up of four custom integrated circuits in MOS/LSI [Metal-Oxide-Semiconductor/Large-Scale Integration] technology and is completely duplicated.

4.2. Digital Switching System

The studies aimed at developing a digital switching system are relatively recent. In 1976, the CSELT, among the first, evaluated the feasibility of a switch of this type, identifying the schemes of reference of development of it, and in addition, has for a couple of years been participating in a research program for experimental verification of feasibility.

The specifications for the switching system derive from a system study conducted by Telespazio (Bibliography 3) for evaluating the suitability of a domestic satellite within the European framework.

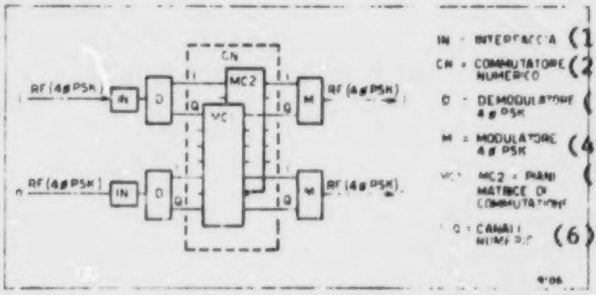

RF (4ϕPSK)
IN
D
I
Q
CN
MC2
MC
M
RF (4ϕPSK)
IN - INTERFACCIA (1)
CN = COMMUTATORE NUMERICO (2)
D - DEMODULATORE 4ϕPSK (3)
M = MODULATORE 4ϕPSK (4)
MC - MC2 - PIANI MATRICE DI COMMUTAZIONE (5)
I Q - CANALI NUMERICI (6)

Figure 1. Functional diagram

Key:

1.	Interface	4.	4ΦPSK modulator
2.	Digital switch	5.	Switching-matrix planes
3.	4ΦPSK demodulator	6.	Digital channels

Figure 1 presents a functional-block daiagram; it shows the structure composed of two parallel planes for switching the two channels (I, Q) at the output from each demodulator (D) before the input of the modulators (M).

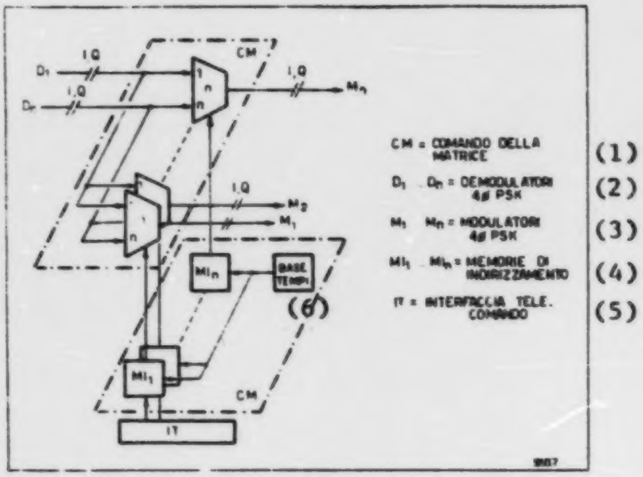

I,Q
D₁
I,Q
Dₙ
CM
1
n
n
I,Q
Mₙ
CM = COMANDO DELLA MATRICE
(1)
D₁ . . Dₙ = DEMODULATORI 4ø PSK
(2)
M₁ . . Mₙ = MODULATORI 4ø PSK
(3)
MI₁ . . MIₙ = MEMORIE DI INDIRIZZAMENTO
(4)
IT = INTERFACCIA TELE. COMANDO
(5)
I,Q
M₂
M₁
1
n
MIₙ
BASE TEMPI
(6)
MI₁
CM
IT
9807

Figure 2. Block diagram of an n·n digital switching system

Key:

1. Matrix control
2. 4ΦPSK demodulators
3. 4ΦPSK modulators
4. Address memories
5. Remote-control interface
6. Time base

Figure 2 presents a more detailed elemental diagram in which the address memories (MI) and the termination of the remote-control channel for writing and monitoring these memories are represented also. The switching system is diagrammed with a set of multiplexers (as many as there are modulators), each capable of switching the two channels; the outputs of the demodulators are multiplied on all the multiplexers.

With suitable programming of the MI memories, it is possible to associate the demodulators with the modulators with any permutation of the connections; in addition, such permutation can be changed numerous times during the string. The sequence of the permutations is repeated identically with each string (but can be changed where a reconfiguration of the connections is required).

The possible structures of a digital switching system are affected by the conditions in which it has to function--in particular, by the fact that the earth-to-satellite propagation time differs from station to station, and in addition, changes in time because of the movement of the satellite.

Therefore the demodulator outputs present signals that are not phase-correlated; in addition, the phase differences are not kept constant in time. Finally, the signals themselves are frequency-modulated by the Doppler effect.

Consequently it would seem advisable to retime the digital flows with the on-board clock before doing any operation (retiming will in fact be necessary when the operations are not limited to switching but it is desired to do actual signal processing on board).

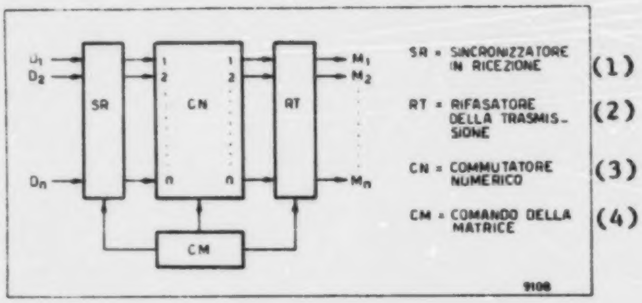

D1
D2
Dn
SR
CN
RT
CM
1
2
n
1
2
n
M1
M2
Mn
SR = SINCRONIZZATORE IN RICEZIONE
(1)
RT = RIFASATORE DELLA TRASMISSIONE
(2)
CN = COMMUTATORE NUMERICO
(3)
CM = COMANDO DELLA MATRICE
(4)
9108

Figure 3. Synchronous-structure switching system

Key:

1.	Reception synchronizer	3.	Digital switch
2.	Transmission rephaser	4.	Matrix control

In addition, a second signal-realignment process at the modulator inputs would be advisable in order to compensate for the differences in propagation time within the matrix and for transmitting continuously in the downlink run.

The complexity of the timing circuits could, however, become prevalent over the complexity of the switching system itself, particularly at the higher cipher frequencies (360 Mbit/s, for example); consequently it is not always possible to provide them where the absorption restraints are severe. The structure of the switching system can therefore take on different configurations.

On the basis of the considerations presented above, two structures for the switching matrix can be identified:

--Synchronous structure (Figure 3). The signals are synchronized and aligned at both the input and the output of the switch. This is the more complex structure, but it offers considerable advantages in terms of string efficiency and permits continuous transmission in the downlink run.

--Asynchronous structure. This structure presents itself as completely transparent to the digital flows that it switches, and in the absence of an alignment circuit, has a simple enough structure; however, it reduces string efficiency and introduces distortions into the flow because of the differences in the propagation times within it

5. Influence of an Asynchronous Switching System on the Performance Characteristics of the Connection

In order to evaluate how much an asynchronous (transparent) switching system can influence the performance characteristics of the connection, let us analyze the principal distortions that it introduces:

a) a phase shift t_{off} between the two flows (normal and in quadrature) switched by the two planes of the matrix;

b) a rapid variation (jitter) t_j of the instant at which the signal changes level because of noise and undesired connections inside the switch;

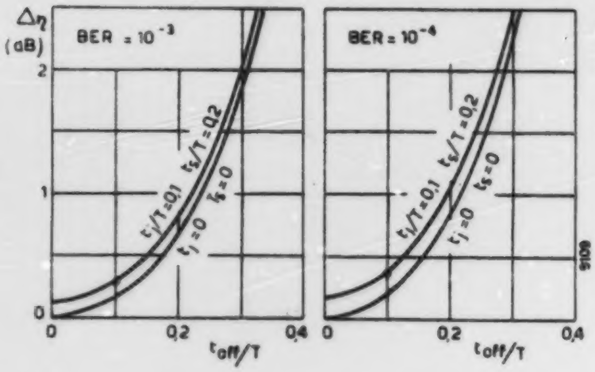


Figure 4. Sensitivity of downlink run to distortions of the modulating waveform.

$\Delta\eta$ = deterioration of signal-to-noise ratio; t_{off}/T = normalized offset time.

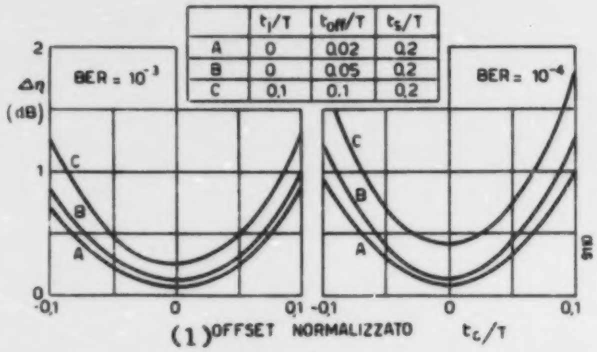


Figure 5. Deterioration of downlink run in function of normalized offset t_c/T at instant of sampling. The curves A and B represent the deterioration in the presence of a realignment circuit at the modulator input. Curve C is calculated in the absence of realignment circuit.

Key:

1. Normalized offset

---

c) increase in uplink and downlink transmission times because of noninstantaneous response of the logic circuits involved. For practical reasons, an increment t_s for the uplink and downlink times should be defined that also includes any difference between the values of t_{off} and t_j.

In order to evaluate the influence of these factors on the performance characteristics of the connection, and of the downlink run in particular, programs have been developed for calculating the deterioration of the signal-to-noise ratio at the error-rate (BER) threshold values of 10^{-3} and 10^{-4} (Bibliography 6). The results are presented in Figure 4.

Typical values for t_j, t_{off} and t_s are:

$t_j = 0.5$ ns $\quad$ $t_j/T = 0.1$ ns
$t_{off} = 0.5$ ns $\quad$ $t_{off}/T = 0.1$
$t_s = = 1.0$ ns $\quad$ $t_s/T = 0.2$

in which $1/T = 180$ Mbaud is the symbol speed.

Correspondingly, the deteriorations of the performance characteristics have the values:

0.3 dB at BER = 10^{-3}
0.4 dB at BER = 10^{-4}

Even though these deteriorations may seem limited, it has been determined, by means of computer simulation, that under these conditions, the sensitivity of the ground-station demodulator at the instant of sampling becomes very critical.

Figure 5 shows the deterioration of the signal-to-noise ratio in function of offset at the instant of sampling. It is obvious that a 10-percent variation on either side of the ideal sampling instant is sufficient to influence the result on the downlink run to the extent of ~1 dB at BER = 10^{-3} and ~1.3 dB at BER = 10^{-4}.

To remedy this disadvantage while leaving the switching system transparent, a rephasing circuit can be introduced at the input of the on-board modulator. It has been demonstrated that jitter is made negligible and the phase shift between the channel in phase and the channel in quadrature can be made less than 0.2 ns ($t_{off}/T = 0.04$).

6. Switching in the Ground Stations

On-board switching is required essentially in order to increase a satellite's capacity and to overcome the necessity of global coverage of the ground stations. The problems that it solves and the functions that it performs have nothing in common with switching as it is understood in the ground telecommunications networks.

The term "switching" as applied to the on-board functions is ambiguous and can be misleading, and all the more so in that a satellite network can really perform switching functions only if the ground stations are organized in a suitable manner, independently of the presence of a switching system on board.

An example may serve to clarify the concept. Let us consider a network configuration characterized by a large number of ground stations, each connected to a number of telephone exchanges. Let one of these stations (the master) be capable of assigning, call by call, the satellite channels between any pair of stations by analyzing the signaling and therefore determining the routing.

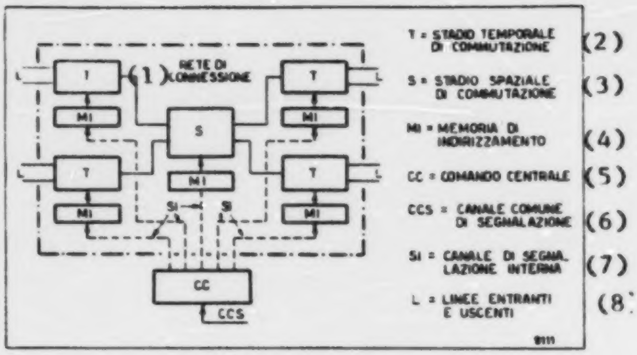

T = STADIO TEMPORALE DI COMMUTAZIONE (2)
S = STADIO SPAZIALE DI COMMUTAZIONE (3)
MI = MEMORIA DI INDIRIZZAMENTO (4)
CC = COMANDO CENTRALE (5)
CCS = CANALE COMUNE DI SEGNALAZIONE (6)
SI = CANALE DI SEGNALAZIONE INTERNA (7)
L = LINEE ENTRANTI E USCENTI (8)
(1) RETE DI CONNESSIONE
T
MI
S
MI
SI
SI
L
CC
CCS
9111

Figure 6. Block diagram of a transit exchange

Key:

1. Connection network
2. Temporal switching stage
3. Spatial switching stage
4. Address memory
5. Central control
6. Common signaling channel
7. Internal signaling channel
8. Input and output lines

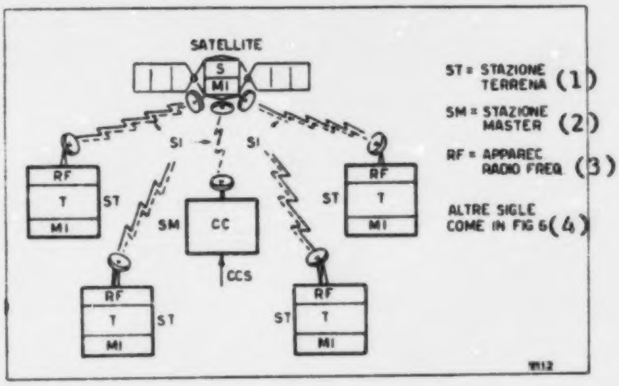

SATELLITE
S
MI
ST = STAZIONE TERRENA (1)
SM = STAZIONE MASTER (2)
RF = APPAREC RADIO FREQ (3)
ALTRE SIGLE COME IN FIG 6 (4)
SI
SI
RF
T
MI
ST
SM
CC
CCS
9112

Figure 7. Network via satellite (analogy with Figure 6)

Key:

1. Ground station
2. Master station
3. Radiofrequency apparatus
4. Other abbreviations as for Figure 6

A structure of this kind is very similar to a transit exchange, albeit of new type--that is, disseminated through the complex of ground stations. The analogy can be continued by seeking a correspondence between the subsystems of the two structures.

Figure 6 presents a typical conceptual block diagram of a transit exchange.

One can recognize: the connection network (TST structure); the central control (CC), connected to the signaling network on a common channel (CCS); and the memories for holding the connections, or address memories (MI), which receive

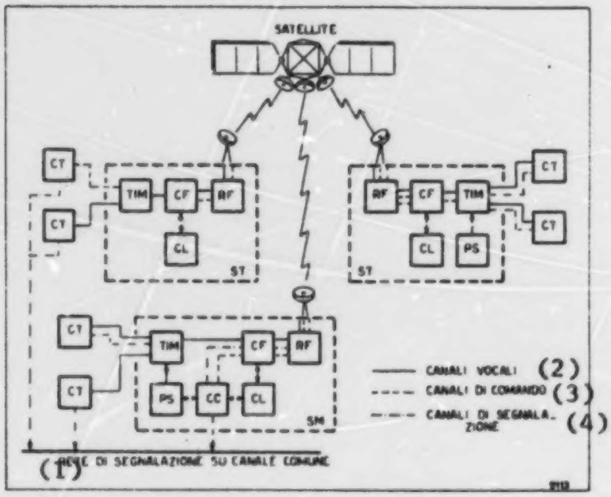


Figure 8. Possible structure of a network with temporal switching (on ground) and spatial switching (in satellite)

Key:

1. Common-channel signaling network
2. Voice channel
3. Control channels
4. Signaling channels

---

the commands to be carried out through appropriate internal signaling paths (SI).

The analogy presented is independent of the structure of the connection network; in particular, it can be proposed again for a satellite with TDMA (Time-Division Multiple Access) without on-board switching.

A more detailed diagram is given in Figure 8, which represents another network via satellite that is capable of providing the telephone exchanges (CT) connected to them both point-to-point connections and switched connections.

The master station (SM) performs command functions for the distributed-structure transit exchange, and it is therefore connected to the telephone exchanges (CT) by means of the normal signaling pathways.

If the telephone exchanges are of new technology, the connection is achieved through the common-channel signaling network, whose master station will be connected by modalities identical to those provided for the other exchanges.

If the telephone exchanges are of traditional technology, with signaling associated with the circuit, the ground station to which they are connected will have to provide initial processing of the signaling (PS) at the level of interface with the ground network (TIM).

The interface with the ground network already performs numerous adaptation functions (analog-to-digital conversion, echo control, synchronization), to which have therefore been added the preprocessing of the signaling and conversion of it into the form of messages for efficient conversation with the master station.

Once the signaling received is processed, the master-station (CC) control will transmit the information relative to the connections to be made to the local peripheral control equipment (CL) at the other stations.

In the ground stations, a switching element (CF), possibly integrated in the TDMA terminal, effects the association between the channel entering (or exiting) from the ground network and the satellite channel selected by the central control. The choice of this channel--a real search for a route within the satellite network--is conditioned by the fact that the internal connections have to be used with the highest efficiency possible.

An assignment-on-demand procedure can provide for this. In the TDMA environment, these procedures are made complex by the problems of synchronism, and in particular, in the case of on-board switching, are still under study.

Schematically, three principal cases can be cited, defined as:

--Fixed origin and variable destination.

The stations transmit bursts of constant length; the synchronism conditions of SS/TDMA access itself are not altered, but within the burst, the channels do not have a predetermined destination. Obviously, the destination can vary only between stations that receive from the same transponder--which amounts to saying that each station is connected by means of a single beam with the stations that converge in the same TDMA.

--Origin and destination variable.

To the performance characteristics of the preceding case is added the capacity on the part of the station to vary the length of its own burst, obviously to the detriment (or advantage) of the other stations that access the same transponder in TDMA. This technique makes it possible to consider each pair of transponders connected by a single beam, no matter what the number of stations that access it.

--Complete variability.

This permits a further possibility as compared with the preceding case--that is, varying, by altering the on-board switching plane, the number of circuits used for relations between pairs of transponders. This makes it possible to consider that the traffic generated by the stations of a transponder is offered to a single beam through the remaining stations.

The three assignment-on-demand techniques offer increasing efficiency at the price of increasing complexity in the equipment on the ground and on board. The advisability of adopting one technique or another has to be evaluated case by case by a balancing between cost and performance characteristics to be achieved in function of the configuration of the network and of its parameters (number of stations, number of transponders, overall capacity of satellite, distribution of traffic elements, etc).

7. Conclusions

The technical and technological progress in the area of communications via satellite are moving their field of application from intercontinental to regional communications, and therefore into the national framework; more and more integration with the ground network is thus being required of the satellite networks, to the point that they may even be required to perform switching functions within themselves.

A fundamental ingredient of this evolution is constituted by the high frequencies (20/30 GHz) that make it possible to achieve high-capacity multibeam systems using on-board switching elements for interconnection of the transponders.

Acknowledgement

The authors are particularly grateful to Engineer Amadesi, who consented to publication of the results reported in section 5.

BIBLIOGRAPHY

1. Berretta, G. and Tirro, S., "New Telecommunication Systems at 20/30 GHz," ICC 1980.

2. "Analysis of a 30/20 GHz Communication System via Satellite"--final report of ESA contract No 3609.

3. Tirro, S., "Possibilities Offered by Digital Satellite Communications for National Communications in a European Country," Fifth International Congress on Digital Communications via Satellite, Genoa 1981.

4. Pattini, F., "Efficiency of an SS-TDMA System with On-Board Bit-Rate Conversion," ICC 1980.

5. Perillan, L. and Rowbotham, T.R., "Intelsat VI, SS-TDMA System Definition and Technology Development," Fifth International Congress on Digital Communications via Satellite," Genoa 1981.

6. Alaria, G.B., Amadesi, P., Garett, E. and Pattini, F., "System Definition of an On-Board SS-TDMA Baseband Equipment," CSELT Internal Report (work done under ESA contract).

11267
CSO: 5500/2352

END

JPRS 82213

10 November 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 247

JOINT PUBLICATIONS RESEARCH SERVICE
25
ANNIVERSARY

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 82213

10 November 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 247

CONTENTS

WORLDWIDE AFFAIRS

ITU Focuses on Frequency Allocation Problems
(NAN, 25 Oct 82) 1

ASIA

AUSTRALIA

British Teletext System Wins Government OK for Australian TV
(Ted Knez; THE AUSTRALIAN, 27 Sep 82) 3

Private Sector Seen as Prime Mover in Data Networks
(THE AUSTRALIAN, 27 Sep 82) 4

Telecom's Data-Switching Service To Follow French Model
(THE AUSTRALIAN, 27 Sep 82) 5

Digital Local Communications Network Growing Rapidly
(THE AUSTRALIAN, 27 Sep 82) 7

Briefs

- Satellite Equipment Contract 8
- Satellite TV Plans 8

PEOPLE'S REPUBLIC OF CHINA

Shanghai Satellite Telecommunications Station Described
(JIEFANG RIBAO, 15 Oct 82) 9

Briefs

- Beijing Telephone Service 10
- Liaoning Dialing Capacity 10
- Radio Stations Meeting 11

PHILIPPINES

Cabinet Approves Telecommunications Development Program
(Willie Ng; BULLETIN TODAY, 27 Oct 82) 12

LATIN AMERICA

HONDURAS

Briefs

More Telephone Lines 13

NICARAGUA

Briefs

Ocotal-Jalapa Telephone Line 14
Radio Zinica Described 14

ST. LUCIA

Briefs

International Phone Dialing 15

NEAR EAST AND NORTH AFRICA

JORDAN

Telecommunications Projects Reviewed
(AL-RA'Y, 23 Aug 82) 16

SUB-SAHARAN AFRICA

INTER-AFRICAN AFFAIRS

Report on 'PANA' Meeting in Senegal
(AFP, 30 Oct 82) 19

ZAIRE

Briefs

Phone Link to France 21

ZAMBIA

Minister Says New Mass Media Complex Will Not Improve Reception
(TIMES OF ZAMBIA, 20 Oct 82) 22

WEST EUROPE

FEDERAL REPUBLIC OF GERMANY

Briefs
- Satellite Text, Images 23

FRANCE

Public Sector's Number of, Budget Allotment for Computers (Pierre Linde; LES ECHOS, 22 Sep 82) 24

Entrepreneurs Create Data Processing Firms, Innovations (Albert Galland; L'USINE NOUVELLE, 16 Sep 82) 31

Briefs
- Experimental Data Bank 42
- Jeumont-Schneider Diversifies 42

SPAIN

Direct Broadcast TV Satellite Planned (Agustin del Moral; ABC, 20 Sep 82) 43

ITU FOCUSES ON FREQUENCY ALLOCATION PROBLEMS

AB261156 Lagos NAN in English 1130 GMT 25 Oct 82

[NAN feature: "Sharing the World's Airwaves," by James Bello, NAN correspondent in Nairobi]

[Text] One of the issues commanding the attention of the International Telecommunication Union (ITU) conference in Nairobi is whether Israel should be expelled or not. The United States has threatened to suspend financial subsidies if Israel, its protegy, goes, and countries such as Britain have appealed to the angry Arab nations to contain their anger by merely condemning Israel for its adventure in Lebanon.

But while the Israeli presence is a controversial issue, perhaps what is more fundamental and of profound relevance to the more than 1,000 delegates from the 150 member-countries is the question of control of the world's air waves.

The union, until recently, has always been an exclusive club of the major industrialized nations, and includes such ideological incompatibles as the United States and the USSR. This has made for a situation where the world of communications has developed without any Third World representation, despite the fact that the majority of the world's people live in the Third World.

Nigeria's communications minister, Audu Ogbeh, who is the leader of Nigeria's delegation to the conference, has described the situation as keeping the developing nations at a perpetual technological disadvantage. He termed it unfair, where a very limited resource is entirely dominated by more powerful nations because they possess the technology to develop and share transmitters.

One question the Nairobi conference has clearly brought into focus is, whether the developed nations will continue to monopolize 80 percent of the world's air waves to the disadvantage of developing nations.

The Group of 77, made up of Third World states in the union, thinks that the world is so intricately interwoven and interdependent that what goes on in the Third World affects the developed nations, to the extent that there can be little room for indifference.

It is therefore not surprising that as far as the Group of 77 is concerned, the allocation of frequency bands is central to their deliberations. Algeria, Indonesia, Nigeria, Venezuela, Zimbabwe, Tunisia and Yugoslavia appear to be extremely vocal on this issue. Almost all the Third World countries at the conference are also jostling for places in the union's Frequency Regulation Board (FRB), a body responsible for allocation of frequency bands to countries to use in broadcasting.

Since the present available technology allows for the use of only a limited number of frequencies, nations have to almost fight to get them. But the Third World has up to now been at a disadvantage in this struggle. This is because primarily, negotiations are rather technical, and secondly, because the allocations are made on the basis of the country's technological ability to utilize them. Thus, the technologically-advanced United States, Soviet Union and Britain dominate the world's air waves.

A case in point is the external service of the Voice of Nigeria broadcasts to east Africa on the 15.185 frequency. Listeners in Nairobi are extremely familiar with how the Voice of America unendingly interferes with these broadcasts.

At the moment the control over frequencies seems to be moving into particularly perilous straits. This is because satellite communications systems--some of which are owned by private corporations and states--have become the main form of filling the air waves. Yet, almost all of these are controlled by Western countries and the Soviet Union.

But even the few countries outside the industrialized West who are renting space in these communications systems do not have much control over their operations. According to the leader of the Chinese delegation, who is also his country's vice-minister for posts and telecommunications, Zi Yukui: "This state of affairs should not be left to continue if the Third World is to use modern communications not only for educational purposes, but for development and communicating effectively with the rest of the world."

In the view of Nigeria's communications minister, it is in the interest of the developed nations to make sure that they give greater attention to telecommunications problems of the Third World. It is a well-known fact that the development of telecommunications in the Third World would mean better business for the industrialized nations and greater access to Third World resources.

Yet, it is clear that many Third World governments have not come to terms with their potential, nor are they able to exploit the communications revolution. After all, the setting up of radio stations, telex and telephone systems, television stations and other ancilliary communication structures for a country is not a mere luxury. Indeed, it is one of the key instruments that must be secured for viable nation-building.

CSO: 5500/20

BRITISH TELETEXT SYSTEM WINS GOVERNMENT OK FOR AUSTRALIAN TV

Canberra THE AUSTRALIAN in English 27 Sep 82 p 22

[Article by Ted Knez]

[Text] THE Federal Government yesterday took a big step towards turning the country into a plugged-in, switched-on society with access to instant, push-button information.

It approved a British system, UK Teletext, for adoption by television stations as Australia's official broadcast information service.

The move, announced yesterday by the Minister for Communications, Mr Brown, paves the way for one of the most radical transformations in television viewing since the introduction of color almost a decade ago.

Mr Brown said the decision would enable the broadcasting industry to "plan with confidence" knowing the Government endorsed and encouraged the development of teletext.

He also said the service would be free to viewers except for the $300 to $500 cost of a television adaptor to receive information broadcasts.

"This decision will give extra impetus to the wider use of television as a communication medium," Mr Brown said.

"Continuing development of teletext will enable far more information to be conveyed by television — and when the viewer wants it."

Mr Brown said teletext would provide viewers with an "impressive array" of up-to-date information at the touch of a button whenever the viewer wanted it.

News bulletins, weather reports, transport timetables, stockmarket reports, film details, quizzes, medical safety measures, community news, sport and the latest race results were normally available instantly.

"For example, viewers watching television can be alerted to news flashes by messages automatically appearing on the bottom of the screen," Mr Brown said.

"They can then, if they wish, switch over from their television program and call up the latest bulletin via Teletext which is then printed on the screen.

"Having read the printed words on the screen they can then switch back to the television program or call up other pages of teletext information.

"Punters need not leave their chairs to find out by teletext the latest racing information and results.

"Viewers can work out household budgets from detail provided by teletext before going out to shop."

Mr Brown said the Government's decision to endorse UK Teletext followed trial operation of teletext services by television stations, announced in 1980, and a subsequent review of the trials by his Department.

"Viewers wanting to receive teletext services must buy a special decoding device to attach to an existing television set, or buy a set with a built-in decoder," he said.

"Apart from buying a decoder, teletext is a free service and viewers do not have to subscribe to the service. This is so because it is broadcast in the same way as usual television programs."

He said the Government was aware that teletext systems, other than UK Teletext, were under development overseas, and they would be watched with interest with a view to possibly introducing them here in future.

CSO: 5500/7508

AUSTRALIA

PRIVATE SECTOR SEEN AS PRIME MOVER IN DATA NETWORKS

Canberra THE AUSTRALIAN in English 27 Sep 82 p 12

[Text]

DEVELOPMENT of Australia's electronic information networks will be done mainly by the private sector, according to an official of the National Library of Australia.

The assistant director-general (technical services), Mr Bryan Yates, said the private sector would be attracted to the profits from selling "re-packaged high-use" data.

Financial constraints on the public sector prevent it from providing the risk capital needed to put information it collects into a readily discernable and mass consumable form suitable for high-use data bases. The present data networks were excluding the majority and servicing specialised markets.

In most cases this information was bibliographic and referred to sources of information rather than supplying it.

More users would look to networks supplying real time information — facts, figures, and digests — which were ready for use.

"The National Library welcomes the private sector developments and sees the totality of usable and used information increasing through them," he said.

"Unfortunately, this will lead to profitability being the prime criteria for the running of a data base.

"Some of these (unprofitable) data bases could be essential to Australia and a subsidy or some other method would have to be found to keep them going."

The National Library's view was that it would make the data bases it created available at commercial rates and on a non-exclusive basis to any commercial operator.

Mr Yates said the library's first priority was development of its Australian Bibliographic Network, which had been established in November 1981, to meet demonstrated needs of Australian libraries.

The network had already proved its viability, he said.

"The data base will be enhanced and the network is likely to consist of a central data base for on-line cataloguing, enquiries and union catalogue functions.

"It will ultimately have interfaces with other computer-based networks."

The company has already had preliminary talks with Australia's largest videotex group, Computer Power.

CSO: 5500/7508

TELECOM'S DATA-SWITCHING SERVICE TO FOLLOW FRENCH MODEL

Canberra THE AUSTRALIAN in English 27 Sep 82 p 16

[Text] **TELECOM's new packet-switching service, Austpac, will begin to revolutionise information processing in business offices around Australia from December.**

The service will make all aspects of distributed communications more economically feasible, including such relatively new techniques as electronic mail and electronic funds transfer.

It is a revolution that is well under way in Europe, where 17 countries already have operating or planned public packet-switched data services.

In Australia, Telecom's plans to provide the network by the end of this year are proceeding smoothly.

The DPS25 packet-switching system, designed and manufactured by Sesa of France, has been selected to implement Austpac.

As in the French Transpac network, where suppliers Sesa and DPS25 have a proven track record, Austpac will also use Honeywell DPS 6. The system owes much of its development to the significant experience gained by Sesa in its implementation of the Transpac packet-switching network for the French Post and Telecommunications Administration.

It also builds on Sesa's expertise in the operational DPS25 networks of the European space agency, French Railways Board and the Luxembourg Telecommunications System.

Demand for these networks has been heavy. By the end of last January, according to Mr Paul Guinaudean of the French Centre National Detudes de Telecommunications, Transpac had about 5500 direct user connections including more than 4200 x .25 connections.

Sesa's track record has been reinforced by the success of DPS25, a distributed architecture system comprising Honeywell DPS 6 computers and multiple micro-computers.

Australian manufacturer, Standard Telephones and Cables Pty Ltd, will provide cabling, power supplies and board repair facilities for the system.

The order from Sesa for Austpac nodes comprises four level 6/43s, three to be delivered immediately into Telecom's Melbourne computer complex and the fourth to be held in reserve.

Of the three initial configurations, one level 6/43 will collect accounting data from Austpac and the other two will comprise the network management centre which will handle subscriber connections and provide internal network control.

Reflected in the choice of the DPS 6, according to Honeywell consultant, Mr Rex Lehmann, is the company's rigid conformation to the International Standards Organisation's open systems architectural reference model and its extensive experience in installed networks for customers throughout the world.

Sesa was chosen, according to the product engineering manager of Telecom's packet-switching network group, Mr John Harrison, in part because it met the tender requirements of being the least expensive technically-suitable system available.

But there was one other requirement in this tender — that it be a working system able to be delivered in a relatively short timetable, Mr Harrison said.

Sesa has built two large networks, Transpac and the Euronet network of the European Economic Community.

It has also sold public networks to Luxembourg, New Zealand, Brazil and Finland and has sold large private networks in the US through Sesa-Honeywell, including a network for the Chase Manhattan Bank.

Mr Harrison said the fact that Australia was just beginning its network at a time when many others had already been established throughout the world was no reflection on the country's technological advancement.

From its beginning until today, the public packet-switching story is only about five years old, he said.

But there was no doubt the network would revolutionise the way organisations managed their businesses in Australia.

As organisations begin to progress towards the paperless office, packet-switching will provide an answer, Mr Harrison said.

Austpac tariffs are independent of distance and make it possible to afford switched data communications anywhere. Long-term implications are even more revolutionary.

As demand became evident, Mr Harrison said Telecom planned to establish an interface to the telex network, allowing users to communicate across both networks.

In addition, such a connection would pave the way for Austpac users to communicate directly with international telex users.

Austpac is really about two things, Mr Harrison said. It will be of benefit to users who want to use their single terminal to call different host computers, irrespective of make.

These people will have a real data-switching requirement. It will also be of help to those customers who do not know exactly what network they will require in the next six months.

To configure and reconfigure a network, or to buy a consultant to do it, is costly. And to get private line circuits, especially if you require them around the country, takes time.

What Austpac offers is a completely pre-provided network, which you can access just by making a call.

In additon, in a private network, it is most often the computer manufacturer which handles the customers problems in terms of data flow and where it is to go, builds the customer's network, selects equipment and possibly even issues the order for data lines from Telecom and then leaves when delivery is completed.

Mr Harrison added that if the customer wanted to change suppliers, he had to call in a consultant or another computing company.

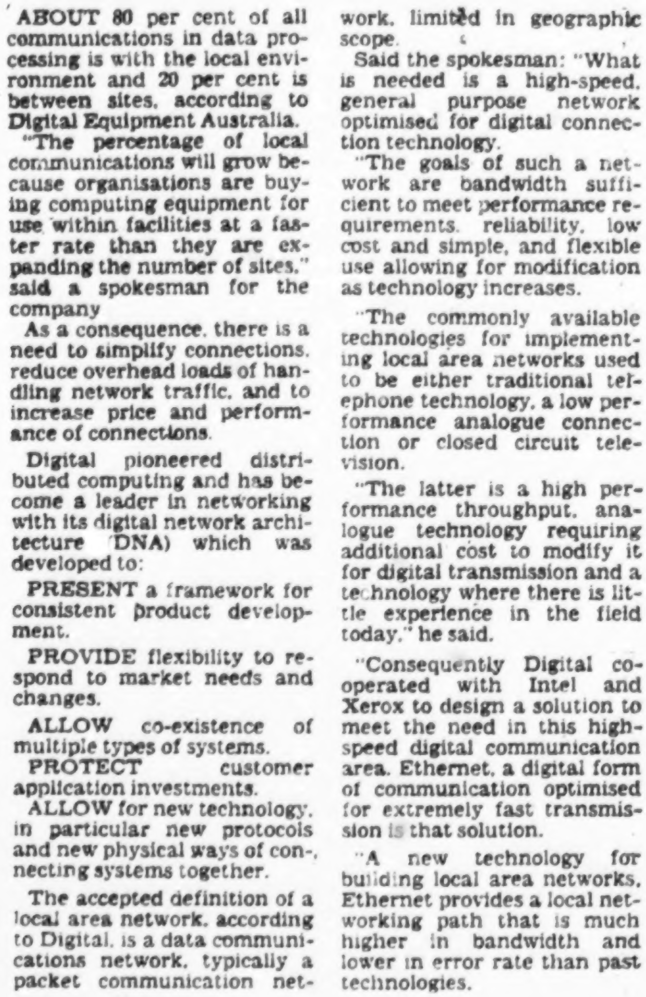
With Austpac, the customer can have the major part of his private networking problems handled by Telecom as part of its operation of the public network.

CSO: 5500/7508

DIGITAL LOCAL COMMUNICATIONS NETWORK GROWING RAPIDLY

Canberra THE AUSTRALIAN in English 27 Sep 82 p 17

[Text]



ABOUT 80 per cent of all communications in data processing is with the local environment and 20 per cent is between sites, according to Digital Equipment Australia.

"The percentage of local communications will grow because organisations are buying computing equipment for use within facilities at a faster rate than they are expanding the number of sites," said a spokesman for the company.

As a consequence, there is a need to simplify connections, reduce overhead loads of handling network traffic, and to increase price and performance of connections.

Digital pioneered distributed computing and has become a leader in networking with its digital network architecture (DNA) which was developed to:

PRESENT a framework for consistent product development.

PROVIDE flexibility to respond to market needs and changes.

ALLOW co-existence of multiple types of systems.

PROTECT customer application investments.

ALLOW for new technology, in particular new protocols and new physical ways of connecting systems together.

The accepted definition of a local area network, according to Digital, is a data communications network, typically a packet communication network, limited in geographic scope.

Said the spokesman: "What is needed is a high-speed, general purpose network optimised for digital connection technology.

"The goals of such a network are bandwidth sufficient to meet performance requirements, reliability, low cost and simple, and flexible use allowing for modification as technology increases.

"The commonly available technologies for implementing local area networks used to be either traditional telephone technology, a low performance analogue connection or closed circuit television.

"The latter is a high performance throughput, analogue technology requiring additional cost to modify it for digital transmission and a technology where there is little experience in the field today," he said.

"Consequently Digital co-operated with Intel and Xerox to design a solution to meet the need in this high-speed digital communication area. Ethernet, a digital form of communication optimised for extremely fast transmission is that solution.

"A new technology for building local area networks, Ethernet provides a local networking path that is much higher in bandwidth and lower in error rate than past technologies.

CSO: 5500/7508

BRIEFS

SATELLITE EQUIPMENT CONTRACT--CANBERRA--The Federal Government has approved a $30 million proposed contract for the supply of satellite equipment. The Communications Minister, Mr Neil Brown, said negotiations between Aussat Pty Ltd and Mitsubishi Australia Ltd for eight major city earth stations had reached the final stage. "This is another important step towards meeting the Government's goal of having the national communications satellite system operating in 1985," Mr Brown said. Aussat, which is the owner and manager of the satellite system, is looking for sites in Sydney, Melbourne, Darwin, Perth, Adelaide, Canberra, Brisbane and Hobart for the earth stations. The total cost of the stations is about $65 million, but the contract with Mitsubishi will be worth $30 million. Mr Brown said half of the building work would be done by Australian contractors. He said the stations, which enable signals to be transmitted via the satellite, would be used by the Australian Broadcasting Commission for radio and television. [Brisbane THE COURIER-MAIL in English 20 Sep 82 p 9]

SATELLITE TV PLANS--THE Federal Government is to consider direct broadcasting by television networks when the domestic satellite is launched in 1985. But the move is vigorously opposed by regional television operators who fear direct broadcasting will kill them. The Minister for Communications, Mr Brown, has called for proposals from regional television stations He told the Government joint parties there was potential in the satellite for direct broadcasting. The potential was largely unforeseen when the Government let tenders for the satellite. But since then the manufacturers had developed a switching system to make direct broadcasting possible. But the regional operators fear they could be swamped by network television programs produced in Sydney or Melbourne then beamed live throughout the country A spokesman for Mr Brown yesterday agreed the television industry was operated largely on a regional basis. It is understood Mr Brown is considering the satellite's direct broadcasting potential in light of its new versatility. But the spokesman insisted no decision had been taken on how the new potential of the satellite should be used. [Canberra THE AUSTRALIAN in English 23 Sep 82 p 4]

CSO: 5500/7508

SHANGHAI SATELLITE TELECOMMUNICATIONS STATION DESCRIBED

OW200042 Shanghai JIEFANG RIBAO in Chinese 15 Oct 82 p 1

[Text] According to recent statistics of the International Telecommunications Satellite Organization: In first half of 1982, the telecommunications quality of the Shanghai satellite telecommunications ground station again ranked first together with another station among 227 international satellite telecommunications ground stations in the world.

The International Telecommunications Satellite Organization usually conducts a qualitative evaluation of the ground station in various countries every 6 months. The evaluating covers four major systems--antenna, high-power transmission [gao gong fang 7559 0501 2397], (?cold transmission) [leng can fang 0397 0639 2397], and electric power--; and three indices--equipment utilization ratio, number of traffic interruptions and total time of traffic interruptions. This is the fourth time that the Shanghai station rendered outstanding performance. Its open circuit ratio ranked first among 227 ground stations in the world.

The Shanghai ground station is one of China's major international communications facilities. It transmits and receives international telegrams, telephones, television and radio facsimile through a telecommunications satellite over the Pacific. When it was set up in 1972, it had only four lines leading to the United States. In the past 10 years, particularly since the 3d Plenary Session of the 11th CPC Central Committee, it has added 76 lines connecting with Japan, Australia, Singapore, Thailand and Hong Kong to meet the development of China's relations with foreign countries. Since 1978, the telecommunications handled by the station has been increasing at an average rate of 67 percent yearly. The party branch of the station has led the scientific and technical personnel and workers to seriously implement the guidelines of the 3d Plenary Session of the 11th CPC Central Committee, carry out education in patriotism to urge the workers and staff to win honor for the country, strengthen technical training and operational evaluation and exercise strict quality control. It has set up rules and regulations regarding "management of radio equipment," "operations of key equipment" and "analysis of electrical circuit equipment." At the same time, it has boldly emancipated the minds, undertaken 21 technical innovations on imported equipment and thus remarkably improved the quality of telecommunications.

CSO: 5500/4103

BRIEFS

BEIJING TELEPHONE SERVICE--Beijing, 9 Oct (XINHUA)--Beijing plans to increase the number of subscriber lines in the urban area from 115,000 at present to 200,000 in 1985, raising the average number of telephones per 100 persons from present 5 to 7 in 1985, according to the city's telecommunications bureau today. In order to attain the goal, 18 exchange offices are to be built or expanded by the end of 1985, of which three should be completed this year. The city now has 27 exchange offices in the urban area, with a total of 227,000 telephones. The state allocates special funds and remits all telephone profit. In addition, special permission is granted for telephone installation fees and joint investment with telephone subscribers. Dozens of engineers and technicians are working on the project and priority has been given to construction (?of) the telephone service. Most telephone subscribers are government offices and industrial and business establishments, neighbourhood and public telephones are used by the general public. Beijing began using a magnet type telephone system in May, 1904, when 110 telephones were installed in the summer palace, the imperial court and military installations of the Qing Dynasty. An automatic telephone system was set up in 1940 and there were only about 26,000 telephones in Beijing by October 1949, when the People's Republic was founded. [Text] [OW090831 Beijing XINHUA in English 0705 GMT 9 Oct 82]

LIAONING DIALING CAPACITY--Since the 3d Plenary Session of the 11th Party Central Committee, posts and telecommunications undertakings have been developed well in Liaoning Province. The number of telephones in the province's urban areas has increased by 35,000 sets, increasing at an average rate of 8 percent every year. The province now has 1,502 long-distance dialing lines, an increase of 54.33 percent over 1978. In the past 4 years, the province has built, one after another, the Shenyang long-distance communications general station, the Dandong international post and telecommunications exchange station, and the Qinhuangdao-Shenyang electric cable carrier equipment. As a result, the communications capacity has been increased and the shortage in this regard has been alleviated. In addition, long-distance automatic dialing exchange equipment has been basically built at the Shenyang long-distance communications general station. With the operation of this equipment in the first quarter of 1983, direct dialing services linking Shenyang with Anshan, Tieling, Liaoyang, Dandong, Jinzhou and Fuxin municipalities and linking Shenyang with Beijing, Tianjin, Shanghai, Lanzhou, Xian and Changchun municipalities will be established. [Shenyang Liaoning Provincial Service in Mandarin 1100 GMT 15 Oct 82 SK]

RADIO STATIONS MEETING--The broadcasting stations of seven eastern Chinese provinces and municipalities opened their second meeting to exchange information on news programs on 21 October in Wuxi City. The main topic of the meeting is to implement the guidelines of the 12th party congress, strive to produce good radio news programs and give better service for building the two civilizations. Attending the meeting are responsible persons of broadcasting administrations and broadcasting stations of the seven eastern Chinese provinces and municipalities, responsible persons of some city and county broadcasting stations and editors and reporters concerned. The Ministry of Radio and Television, the Central People's Broadcasting Station and radio stations of fraternal provinces, municipalities and autonomous regions also sent representatives to the meeting. (Li Wei), deputy director of the propaganda department of the Jiangsu Provincial CPC Committee, extended cordial greetings to the delegates at the meeting on behalf of the provincial party committee. Seventy delegates have begun discussions in a serious and lively atmosphere. [Text] [OW242100 Nanjing Jiangsu Provincial Service in Mandarin 2300 GMT 21 Oct 82]

CSO: 5500/4103

CABINET APPROVES TELECOMMUNICATIONS DEVELOPMENT PROGRAM

Manila BULLETIN TODAY in English 27 Oct 82 p 1

[Article by Willie Ng]

[Excerpt] Prime Minister Cesar Virata and the First Lady, Minister of Human Settlements Imelda R. Marcos, led the cabinet last night in approving a ₱1-billion telecommunications development program for the nation's cities.

Mrs. Marcos said that government must get into the program because the private sector can not come up with the huge investment outlays required.

Noting that the Philippine Long Distance Telephone Co. and other telephone franchise holders can not handle the demand for communication facilities, she said:

"We have to get into the picture because private business can not afford the investment risks and the high interest on loans."

Minister of Transportation and Communications Jose Dans said that the program will be financed partly by a West German loan, payable in 50 years, with a grace period of 20 years.

In the meeting held at the Batasang Pambansa, Minister Dans noted that telephone services have progressed at a snail's pace in the last 20 years. The telephone density was only 1.45 telephones per 100 persons as of Dec. 1, 1980, he said.

These figures are low compared to those in other developing countries, he said, citing Malaysia with a density of 3.82 telephones per 100 persons.

Improvement of phone facilities will begin in profitable commercial or urban areas such as Metro Manila, Cebu, and Davao, Dans said.

The cabinet also approved a plan to improve telecommunications facilities in Regions 1 and 2 in Northern Luzon, providing an additional 32,000 main stations and 49 local exchanges with 37 toll stations, known as Phase II.

CSO: 5500/4307

BRIEFS

MORE TELEPHONE LINES--Tegucigalpa--The Honduras Telecommunications Company is continuing to improve and enlarge the capital's telephone system by installing 11,000 telephone lines which will benefit an equal number of Central District families. At present an adjudication commission of representatives of HONDUTEL, Support Agency of the Republic, and the Office of Administrative Integrity is studying the qualifying bids presented by 29 firms specializing in building and supplying materials for connecting modern telephone systems. The Miraflores and Toncontin telephone plant enlargement project will make possible the operation of an additional 6,000 lines in Comayaguela and 5,000 lines in the Tegucigalpa sector beginning in November 1983. If there are no complications, in the coming months bids will be taken for the purchase of equipment and materials while the infrastructure work will begin which will make it possible, according to plan, to begin the actual work next January. [Text] [San Pedro Sula LA PRENSA in Spanish 15 Sep 82 p 4] 9204

CSO: 5500/2005

NICARAGUA

BRIEFS

OCOTAL-JALAPA TELEPHONE LINE--Jalapa--With the dialing of the prefix 02 and the telephone number of the Office of the Minister of Telecommunications and Postal Service of Nicaragua the important hard line Ocotal-Jalapa was put into operation on the 17th of this month. Companero Marne Serrano, vice minister for technical development for TELCOR [Nicaraguan Telecommunications and Postal Services Institute], said "Hello, hello" over the telephone to Minister Enrique Schmidt. This TELCOR project, which involves a development from every point of view, cost 2.5 million cordobas. Part of the equipment, donated by the Mexican Government, required an investment of 1 million cordobas. The hard line Ocotal-Jalapa project was begun last January with 30 TELCOR comrades participating. They worked night and day under the supervision of specialized technicians to provide the Nueva Segovia Municipality with an efficient automatic telephone service. This work is the last phase o of the project which also includes Esteli, Somoto, Las Manos and El Espino and which is 75 kilometers long. The work began in 1981. [By Jilma Rodriguez] [Excerpts] [Managua BARRICADA in Spanish 21 Sep 82 p 7] 9204

RADIO ZINICA DESCRIBED--Bluefields--Radio Zinica, a station of CORADEP, the Radio Broadcasting Corporation of the People, broadcasts on two frequencies. Thus it and La Voz de Nicaragua are the only broadcasters with short and medium wave transmitters. Radio Zinica started broadcasting in this part of the Atlantic Coast on 11 October 1979. Since then, it has shown itself to be a radio station with a new outlook since it has assumed an educational, guiding and formative role on the Atlantic Coast. With the installation of the new transmitter--the result of the efforts of La Voz de Nicaragua and INNICA [Nicaraguan Institute of the Atlantic Coast] the station plans to expand its operations, carrying the revolutionary message to a wider area. Specifically, the Radio Zinica broadcasts on two frequencies constitute another achievement of the revolution as a means of integrating this area more and more with the rest of the country. During the almost 3 years since it was created, the revolutionary transmitter has reached a high level of development in both the technical and the economic aspects. Since it became part of CORADEP, it has been provided better support and advice necessary for the proper operation of the transmitter. With varied programs, Radio Zinica goes on the air from 0500 hours to 2300 hours. The station's message reaches several cities inside the country and abroad, according to reports which have been received. Because of its revolutionary line it is also the voice of the coastal people. [By Teofilo Barrillas] [Excerpts] [Managua BARRICADA in Spanish 20 Sep 82 p 7] 9204

CSO: 5500/2005

BRIEFS

INTERNATIONAL PHONE DIALING--THE Castries, Sans Souci and Reduit telephone exchanges will be "cut over" to the International Subscriber Dialling (ISD) system on September 25 at around 2 o'clock in the afternoon. Mr. Gynn said that cut over set for August 28, had to be postponed due to engineering hold ups. "We had not finished testing the system. It is a very complex system and we want to ensure that everything is in order before we put it into use. So we are carrying out numerous tests on all lines and customers' equipment," he explained. Meanwhile, the company requests that on the time of cut over, subscribers refrain from using their telephones. The General Manager said that any call during that time may be disconnected and subscribers should 'avoid making any calls between 1.45 p.m. and 2.15 p.m." He added: "Due to the size and complexity of this change, only a restricted service will be available throughout the rest of the afternoon." After cut over, a test call will be made to all tepehones, the public is requested to confirm this test with the Operator that subscribers have the correct number which corresponds with the number listed in the telephone directory, said Mr. Gynn. [Castries THE WEEKEND VOICE in English 11 Sep 82 p 3]

CSO: 5500/7507

TELECOMMUNICATIONS PROJECTS REVIEWED

Amman AL-RA'Y in Arabic 23 Aug 82 p 8

[Text] The era we now live in is an era of communications. The telephone has become the chief requirement and the foundation in the world of communications for any advanced society.

Simply speaking, the telephone represents the shortening of time and distances, the elimination of obstacles, and the bypassing of difficulties. Many actions can be accomplished by means of it. Through this device, disasters and tragedies can be avoided. Because of these characteristics, the telephone is a main focus of concern on the part of the government, which is endeavoring by a variety of means to move Jordan into the ranks of the developed world. What is the telephone's position on the map of progress? How do officials respond to the complaints and inquiries of citizens regarding telephone problems? What is the future of telecommunications in Jordan in the coming year?

Engineer Muhammad Shahid Isma'il, general director of the Wire and Wireless Communications Organization, answers these and other questions in this interview with the JORDANIAN NEWS AGENCY.

The Shortage

Concerning the plan that has been formulated to provide additional telephone lines to fill the existing shortage and meet the request of any citizen who wishes to subscribe without delay, the general director of the Wire and Wireless Communications Organization had the following to say:

"In accordance with the projects of the 1981-1985 five-year development plan, the total number of telephones available in the kingdom will reach 248,000, including 200,000 telephones in the capital itself. The organization will spend some 1,107,000 dinars in capital expenditures for this purpose. This represents four times the amount allocated to the organization in the previous five-year plan. This rejects the concern and commitment of the state to expanding the volume of telephone services in sufficient amount to meet the growing demand.

"In this context, 117,465 telephone lines will be provided in accordance with projects funded through the Jordanian-French Financial Protocol. Contracts were let for these projects early last year and they are currently under completion. An additional 19,000 telephone lines will be provided through a project aimed at increasing the capacities of the electronic exchanges in operation in the capital. The contract for this project was let last May. Some 30,000 aditional lines will be installed in the central capital through another project for which the contract was awarded last June. In addition, 50,000 telephone lines will be added in the city of al'Aqabah. The contract for this project was also awarded last June.

"All of these are in addition to the other projects that will provide additional telephone lines."

Direct National Dialing

Engineer Isma'il also commented on the situation regarding direct automatic dialing service among cities within the kindom and between the kingdom and the rest of the world and discussed the question of when all the areas of the kingdom would be connected with each other and with the outside world through direct automatic dialing. He said the following on this subject:

"There is one exchange for direct automatic dialing at the national level and another for direct automatic dialing at the international level.

"Work is currently underway on a project concerning a new electronic exchange for direct automatic dialing at the national level between the capital and other cities in the kingdom. It is hoped that this exchange will be put in service before the end of the current year.

Automatic Direct Dialing

"With regard to direct automatic dialing at the international level, the installation of this exchange has also fallen behind schedule due to unalterable circumstances. However, the memorandum of mutual agreement between the Jordanian and French governments stipulates that this exchange shall be put into service in stages beginning in November. Moreover, installation of parts of the main exchange began last July. After this exchange is put into operation, Jordan will be connected through direct automatic dialing with various other countries of the world."

Radio Telephones

Concerning the subject of vehicle telephones and their importance and justifications, Engineer Isma'il said: "We are currently in the final stages of letting the contract for this project through which the organization will provide this modern level of service to businessmen, top officials, doctors, contractors, and others in the greater Amman area following the lead of other Arab capitals. It is apparent to anyone that the provision of such services is, in itself, one means of attracting Arab and foreign capital to the kingdom.

"In addition, huge amounts of money are currently being spent to ensure private radio communications for companies, especially in work areas that do not presently have telephone service. Through this project, radio communications can be provided for these sites. This will be accomplished through fixed radio-telephone equipment installed at the work site that will allow the employer to request any domestic or foreign number through purely automatic means. It will also allow employers to install mobile radio-telephone equipment in vehicles if they wish to do so.

"Therefore, the project is not limited to vehicles because radio-telephones can be either fixed or mobile.

Radiotelephones

"From all this, it is clear that the radiotelephone project in this sense is an integrated part of the overall national plan for telephones operating over regular wire networks and is not some kind of luxury. The radiotelephone subscriber can take advantage of all the facilities of the Jordanian national network whether the radiotelephone set is installed in his vehicle, at his plant, or in his office. On the other hand, the services of private radio communications are restricted to limited direct communications between the headquarters of the company and its employees.

"In the planning, care was taken to ensure that the project would be compatible with the latest electronic systems through interlocking modules. This will allow easy expansion of the geographical area served by the project in the future."

Concerning the volume of daily telephone calls within Jordan and between Jordan and the rest of the world, the general director of the communications organization explained: "The volume of international traffic in 1981 amounted to 4,736,297 minutes to various international termination points. This included 2,799,003 minutes with Arab countries. The total volume of this traffic in 1973 was 1,076,369 minutes. This shows the rate of increase in telephone calls in Jordan."

Errors in Bills

With regard to reasons for errors in the amounts due on citizens' telephone bills and ways of correcting them, Engineer Isma'il said:

"Through the use of automatic direct international and national dialing, a special computer will automatically and instantly record the details of each call on a special magnetic tape. It will record the number of the caller, the number called, the date of the call, and the length of the call. This will tend to simplify the process of punching the cards and thus improve the speed of preparation and accuracy of the bills. This is because the punching and checking process requires time and effort, as is indicated by the fact that an average of 140,000 cards are punched per month. These are sent to the Royal Scientific Society to be checked by computer.

"In spite of the present situation, the rate of errors in the amounts of bills is no more than 0.2 percent."

8591
CSO: 5500/4737

REPORT ON 'PANA' MEETING IN SENEGAL

AB310917 Paris AFP in French 1504 GMT 30 Oct 82

[Text] Dakar, 30 Oct (AFP)--The Pan-African News Agency (PANA), which is expected to become operational early next year, has taken an important step in that direction by choosing the technical equipment for its headquarters in Dakar and its regional pool centers in Lagos, Khartoum, Lusaka, Kinshasa and Tripoli.

The equipment was chosen at the end of a meeting in Dakar of PANA's technical committee, which also confirmed the configuration of the agency's telecommunication network. According to PANA director Cheikh Ousmane Diallo, this network will be composed of permanent one-way and two-way circuits for the transmission and reception of news between the headquarters and each pool center and of radio links for the transmission of news from the pool centers to each member state of the pool.

According to PANA, each African news agency will utilize its own means to transmit its news to the regional pool centers or to PANA headquarters.

Mr Diallo indicated that the orders for the equipment and one-way links will be placed "as soon as possible."

The technical committee also decided to begin the training of PANA's technical staff and of the technical staff of member states that do not have a national agency.

In addition, the coordinating committee on the integrated program for the development of news agencies in Africa began to meet in Dakar Saturday with a view to harmonizing the aid received at multilateral level for the development of African agencies.

This program, which receives international financial aid amounting to about $5 million, will help to supply PANA with experts, consultants and equipment as well as train its staff.

At the opening session, Gerard Bolla, UNESCO deputy director for communication, said that PANA's success is necessary for Africa and UNESCO "not only for the sake of satisfaction over a well-accomplished task but also to silence those who still doubt our ability to gradually eliminate the current imbalances and injustices in the field of communication."

Senegalese Minister of Information Djibo Ka stressed that the wager over PANA is finally being won thanks to the political will of the African states and international cooperation. He also hailed the support given to PANA by UNESCO, Arab and European countries (FRG and France), and international organizations.

CSO: 5500/23

BRIEFS

PHONE LINK TO FRANCE--French subscribers can now telephone direct to Zaire, it was announced recently in Paris. The code is (19)243. The cost is 55 centimes per 1.9 seconds. Zaire is the 110th country to have its telephones automatically linked to France. [Text] [London WEST AFRICA in English No 3401, 11 Oct 82 p 2682]

CSO: 5500/16

MINISTER SAYS NEW MASS MEDIA COMPLEX WILL NOT IMPROVE RECEPTION

Lusaka TIMES OF ZAMBIA in English 20 Oct 82 p 1

[Excerpt] THE new mass media complex will not improve radio reception until new transmitters are bought, Minister of Information and Broadcasting Mr Mark Tambatamba said yesterday.

Mr Tambatamba said this during the official opening ceremony by President Kaunda.

He also said delays to start construction work on the multi-million Kwacha complex let to the escalation of the cost from the estimated K20 million to K44 million.

He told the nation not to be over optimistic about improvement in radio reception after the complex had been commissioned. Such improvement could be evident if funds were made available to buy new transmitters.

He told the guests, including Party Secretary-General Mulemba, Prime Minister Mundia, Secretary of State for Defence and Security Zulu and other top officials, that work started behind schedule in 1979 instead of November 1978.

Started

"The construction of the complex started in 1979. At the time it was estimated that the complex would have cost K19 to K20 million. With escalating costs due to world-wide inflationary trends the complex has cost Zambia K44 million."

Mr Tambatamba said many problems had been met during the construction of the complex and there were "bottlenecks" which contributed to the delay in completing the work.

He commended the Nisho-Iwai company for having endured the problems that were faced during construction work.

CSO: 5500/22

BRIEFS

SATELLITE TEXT, IMAGES--It is no longer utopian to transmit text or graphic illustrations via satellite and to have them printed out within a few seconds anywhere in the world. The ESA is showing what can today be done with electronic image scanning and electronic printing processes at the 9-21 August Unispace Conference in Vienna. Ground stations for telecommunications were established especially for this demonstration by ESA in Noordwijk (The Netherlands) and in Vienna. Developments by Agfa-Gevaert are being used as transmitters and receivers. They consist of an image scanner and an electronic printer. Data and the printing order are put in via the image scanner at the Noordwijk ground station. From there, the signal is routed via the OTS, a forerunner of the ESC to the ground station in Vienna where the printer immediately makes the data put in visible. Both the image scanner and the printer process a DIN [German Industrial Standard] A4 form within 4 seconds. Here, digital image processing of the scanner guarantees an image quality (resolution capacity) which shows 8 points per millimeter horizontally and 7.7 points per millimeter vertically. Electronic screening produces shades of grey. [Text] [Duesseldorf VDI NACHRICHTEN in German 13 Aug 82 p 24] 5058

CSO: 5500/2519

PUBLIC SECTOR'S NUMBER OF, BUDGET ALLOTMENT FOR COMPUTERS

Paris LES ECHOS in French 22 Sep 82 pp 11-13

[Article by Pierre Linde]

[Excerpts] Nine thousand thirty four computers with a total value estimated at 19.75 billion francs; that is the current colossal size of the data processing inventory held by public administrations and enterprises. These bodies have multiplied their data processing consumption seven-fold in 10 years, and now hold more than one-third of the national inventory of computers in service. But this data processing gluttony is not without many gaps and shortcomings in acquisition and management, while more and more people fear that this electronic superpower will threaten their individual liberties.

The public sector has been forced to make the computer its instrument of choice, whether for managing, controlling, or distributing a right (for transportation, for payment), or even for collecting its due.

At times this instrument has also served to disseminate among the public an unpopular or distorted picture of data processing: it's the electric bill that asks for two cents, threatening immediate sanctions; it's the fine which you have to pay once more because the computer does not seem to have recorded the first payment; it's the reserved seat on the train which does not exist; and it's a false indicator from INSEE (National Institute for Statistics and Economic Studies).

17 Percent per Year Growth

Minor errors to be sure. But each of them a source of irritation for the population, which soon ends up forgetting the extensive services that it now receives from data processing in its daily life. Services that are sometimes known to a few initiates for whom the "electronic good fairy" is an essential partner; these people are researchers, military men, meteorologists, flight controllers, as well as law professionals, parliament deputies, and policemen (through anti-terrorist files, for instance).

The consequence is a public sector that leads the consumption of data processing in France. The value of its computer inventory is growing at an average annual rate of 17 percent, against only 13 percent for the private sector. Moreover, its operating and management expenses should exceed 15 billion francs during this year.

Distribution of administration inventory by number and value of computers installed each year.

Répartition du parc des administrations par nombre et en valeur d'ordinateurs installés chaque année				
(A) Année d'installation	(B) Total		(E) Croissance (%)	
	(C) Nombre	(D) Valeur en KF	Nombre	Valeur
1963-1965	0	0	0	0
1966	7	41.001	0	0
1967	20	66.964	1	1
1968	8	10.761	0	0
1969	24	57.492	1	1
1970	47	133.229	1	1
1971	63	323.403	1	3
1972	119	170.911	3	2
1973	237	867.767	6	9
1974	311	656.306	7	7
1975	331	840.662	8	8
1976	358	636.174	8	6
1977	538	1.005.727	13	10
1978	657	1.553.348	16	16
1979	737	1.930.827	17	20
1980	767	1.545.792	18	16
Total	4.224	9.840.364	100	100

Distribution of public enterprise inventory by year of installation.

Répartition du parc des entreprises publiques par année d'installation				
(A) Année d'installation	(B) Total		(E) Croissance (%)	
	(C) Nombre	(D) Valeur en KF	Nombre	Valeur
1963	8	9.224	0	0
1964	1	3.500	0	0
1965	1	300	0	0
1966	8	41.152	0	0
1967	14	100.034	0	1
1968	15	53.884	1	1
1969	52	71.351	1	1
1970	42	94.094	1	1
1971	65	45.431	1	0
1972	165	160.690	4	2
1973	248	410.825	5	4
1974	304	830.443	6	8
1975	308	698.808	6	7
1976	515	810.344	11	8
1977	562	1.246.004	12	12
1978	666	1.334.538	14	14
1979	860	2.254.923	18	23
1980	976	1.804.002	20	18
Total	4.810	9.969.547	100	100

Key:	
(A)	Year of installation
(B)	Total
(C)	Number
(D)	Value in KF
(E)	Growth (percent)

Not only are public enterprises and administrations the largest consumers of data processing in France but they also have the largest systems, applications, and programmer staffs.

One emerging problem is the human cost, which is essentially equal to that of equipment acquisition and rental. Data processsing personnel (35,748 people in 1981) is increasing at 3.3 percent per year. According to a Sagha Marketing study, personnel represents 40 percent of the data processing budget of the administrations, compared to only 31 percent for public enterprises. The former apparently are endowed with lower performance equipment, or are less concerned with productivity and good management than the latter.

PTT in the Lead

The data processing vitality of public enterprises (French National Railroad, Electricite de France, and so on) is confirmed by their equipment expenses, which are increasing more rapidly than those of the administrations (see tables extracted from the last annual survey published at the beginning of 1982 by the Ministry of Industry).

The important role played by the Paris region for both sectors is particularly evident in the geographic distribution of their computer inventories, since 56.9 percent and 36 percent of their value, respectively, is concentrated in that region. Once more, this demonstrates the small effect of the decentralization policy conducted by the government for the past 20 years.

PTT is the largest data processing consumer among the administrations. On 1 January 1981, it was using 941 computers of all sizes, with a total value of 2.32 billion francs.

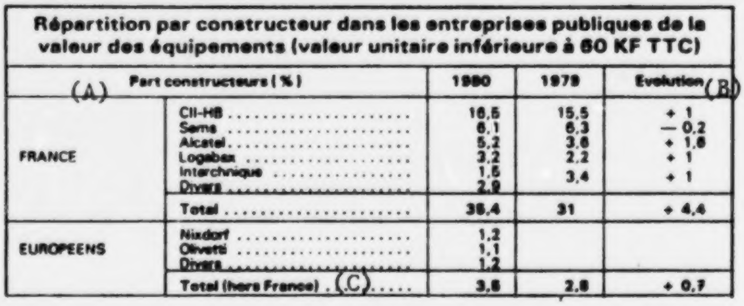
In decreasing order, PTT is followed by the Ministry of Health and Social Security (706 computers with a unit value of more than 0.25 million francs), Interior (662 computers, of which 556 for local collectivities), Defense (535), Universities (458), Economy and Budget (426), Agriculture (206), Education (164), Environment (101), Transportation (94), Industry (53), Labor (31), Justice (20), Culture (9), the Prime Minister (8), and Foreign Affairs (7). It is difficult to assess the ratio of equipment to the tasks that must be performed by these departments, especially since the equipment being used does not have equal performances.

However, surprising disproportions do arise. For instance, Foreign Trade has only one medium size computer, while Environment has more than one hundred. Very strange....

Benefits of "Frenchification"

On the other hand, the "Frenchification" policy carried out by the government has been of great benefit to French equipment manufacturers, whose deliveries between 1979 and 1980 have increased by 5.5 percent for the administrations, and by 4.4 percent for public enterprises (see tables). In value, the former's equipment is 63.1 percent of national origin, and 42.5 percent of that comes from CII Honeywell-Bull alone.

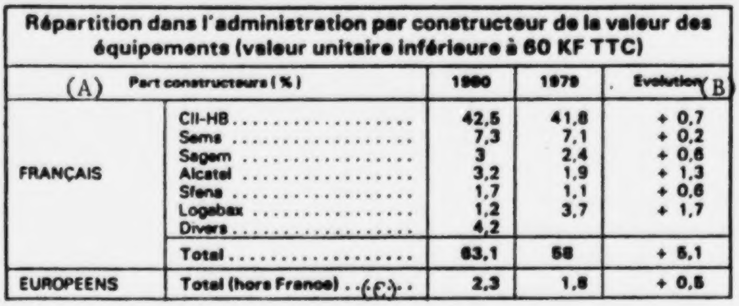
Distribution of value of equipment (unit value less than 60 KF, including all taxes), in public enterprises, by manufacturer.



Répartition par constructeur dans les entreprises publiques de le valeur des équipements (valeur unitaire inférieure à 60 KF TTC)

(A) Part constructeurs (%)		1980	1979	Evolution (B)
FRANCE	CII-HB	16,5	15,5	+ 1
	Sems	6,1	6,3	— 0,2
	Alcatel	5,2	3,6	+ 1,6
	Logabax	3,2	2,2	+ 1
	Interchnique	1,5	3,4	+ 1
	Divers	2,9		
	Total	35,4	31	+ 4,4
EUROPEENS	Nixdorf	1,2		
	Olivetti	1,1		
	Divers	1,2		
	Total (hors France) (C)	3,5	2,8	+ 0,7

Distribution of value of equipment (unit value less than 60 KF, including all taxes), in administrations, by manufacturer.



Répartition dans l'administration par constructeur de la valeur des équipements (valeur unitaire inférieure à 60 KF TTC)

(A) Part constructeurs (%)		1980	1979	Evolution (B)
FRANÇAIS	CII-HB	42,5	41,8	+ 0,7
	Sems	7,3	7,1	+ 0,2
	Sagem	3	2,4	+ 0,6
	Alcatel	3,2	1,9	+ 1,3
	Sfena	1,7	1,1	+ 0,6
	Logabax	1,2	3,7	+ 1,7
	Divers	4,2		
	Total	63,1	58	+ 5,1
EUROPEENS	Total (hors France) (C)	2,3	1,8	+ 0,5

Key: (A) Manufacturers' share (percent)
(B) Change
(C) Hors France = abroad

Except for the European suppliers, which are experiencing a slight growth in this market (+0.15 percent), the major losers have been the American companies, and in particular IBM (-3.9 percent, with the world leader controlling no more than 19.4 percent of this inventory at this point), Control Data (-2.1 percent), and Burroughs (-0.3 percent).

Overall, they are also losing ground with the public enterprises, where they now control only 61.1 percent of the inventory value, compared to 66.2 percent in 1979. The most affected groups are IBM, Control Data, and Univac. But there are two exceptions, Hewlett-Packard and Digital Equipment (DEC), which between 1979 and 1980 have seen their sales increase by 0.2 and 0.1 percent, respectively,

In the French manufacturer camp, only SMS has registered a loss (0.2 percent). CII Honeywell-Bull still holds the lion's share by controlling 16.5 percent of the inventory value, compared to 15.5 percent in 1979. Although the French leader is still improving its position on this market, it is still very far from IBM, which controls 38.8 percent of it.

These comprehensive statistics also hide large disparities. In some administrations and public enterprises for instance, the foreign manufacturers are consolidating their position, and even strengthening it. Such is the case of IBM, benefiting from the leverage derived from its large basis of installed equipment.

The government's interest in encouraging national production has not always been beneficial. In particular, experts at the Audit Office have on several occasions objected to this policy of "preferrential purchases," which at times has led to costly substitutions of equipment (notably at the National Center for Space Studies, or the Toulouse Regional Hospital Center). In those cases, the selection recommended by the government was implemented with new equipment which was incompatible with existing systems.

Gaps and Shortcomings

In turn, the procedure that requires consultation with organs responsible for promoting the state industrial policy in administrations, can be the cause for long delays in the execution of projects; for instance, the hydrographic and oceanographic department of the Navy had to wait more than two and one-half years for the decision of the ministerial commission in order to receive approval to replace a computer. The delays are at times caused by changes in the manufacturer's marketing orientations after the equipment is delivered.

This was the case of the MITRA 125 installed at the University of Angers in 1978, which had to be adapted for new applications, but which was no longer being marketed by the manufacturer the following year.

"A better control of data processing must be planned for the pulic sector," is what the Audit Office recommended last year, pointing out "gaps and shortcomings" in this area. In many cases, a definite lack of rationality compunds the absence or weakness of planning in data processing.

And while some offices of the Social Security or the Banque de France have sought to reconcile centralization and decentralization as a function of types of processing, this balance is far from having been achieved everywhere. For instance: "The systems installed at the Academy of Dijon or at the National Center for Hospital Studies, which are excessively centralized, did not sufficiently take into account the real needs of the universities which they serviced. In other cases on the other hand (Center for Technical Studies on Equipment, Department of Technical Studies for Roads and Freeways), the insufficient control of operations creates a dispersion of study groups, and even job duplication."

In the administrations, cost control is often hindered by the failure to take into account equipment depreciation, as well as by the difficulty in isolating total operation costs in budgets and accounts. In principle, at the time of computerization, "units for organization and methods" should be assigned the task of formulating specifications and of supervising the implementation of applications in data processing centers.

"There should always be a project leader responsible to the administrative authority which is a direct beneficiary. These principles seem to have been overlooked, at least until recently, by the regional data processing centers that concern themselves with family allocations and with collections, as well as by the Compagnie Generale Maritime."

Recourse to outside consulting companies or subcontractors has at times had the effect of diluting responsibilities, and has "given rise to serious mistakes: delays in perfecting programs, unusable documentation, serious accounting errors, and accounts that could not be justified."

"On the other hand, in use, the equipment selected often proves to be overspecified for real needs." The resulting excessive capabilities entail excessive costs and the use of applications that are not strictly necessary, in order to absorb the surplus computation capabilities. "In short, an expensive fling...."

Another observation is that the benefits to be expected from public data processing are not always perceived at their true value, notably by the data processing personnel of administrations or nationalized enterprises, who sometimes have the impression that some technologic changes occur to the detriment of their established privileges, and that these changes will lead to disqualifications or additional work.

Schism Between the Population and the Machine

This has led to recurrent strikes (particularly in the data processing centers of Social Security and nationalized banks) whose ultimate victims are the users. The latter are left with the feeling that they receive poorer service since the massive introduction of these computers, which make gross errors in their accounts (but relatively few and small) and break down unexpectedly.

The formula often heard at service windows, "I can't help it, it's the computer," has finally turned against the clerks (henceforth deemed incapable of any initiative) and against public data processing, which is blamed for everything. This schism between the public and the electronic machine is harmful to the administration's credibility.

One last and serious problem is the protection of individual liberties. Indeed, the public sector is forced by the nature of things to computerize its vast files, which contain all the information about the lives of private individuals, from their birth to their death.

A political or indiscreet use of some of the information (social origin, party allegiance, color of skin, religion, and so on) could harm the people involved.

This potential threat has caused the National Commission on Data Processing and Liberty (CNIL), chaired by Senator Jacques Thirault, to closely examine the problem raised by the utilization of these files, and to issue a number of opinions and recommendations. Such has been the case of the anti-terrorist file currently implemented by the Ministry of the Interior.

Since 1978, "the automatic processing of identification information carried out on behalf of the government...is regulated by a law or by a regulatory act created after a founded opinion from CNIL. If the commission's opinion is favorable, it can be overruled only by a decree issued on the basis of a consonant opinion of the Council of State...."

Thus the public is apparently well protected, but no law can prevent the waste, incompetence, and lax data processing of certain administrations, which are subject to the constraints of a budget, but unfortunately not to those of optimum efficiency.

11,023
CSO: 5500/2506

FRANCE

ENTREPRENEURS CREATE DATA PROCESSING FIRMS, INNOVATIONS

Paris L'USINE NOUVELLE in French 16 Sep 82 pp 118-127

[Article by Albert Galland: "The Daredevils of Data Processing"]

[Excerpts] Six years old, with a lot of energy: the young kids in French data processing companies aren't afraid of competing with the foreign multinationals in the areas of CAO [Computer-Aided Design], voice recognition, automation, etc. Imaginative, dynamic, hardworking, these little companies have made a number of breakthroughs into a a market which they have greatly helped to reinvigorate.

If we had to bring together in the SICOB [International Exhibition of Data Processing, Communications, and Office Management] all the new French data processing companies, one section, even a large one, wouldn't be big enough! For in France, we are now seeing the same phenomenon as in the United States: the number of these new companies is growing. And these companies, which thrive on innovation, are a major advantage for the French computer industry. Two more reasons tend to suggest that the future doesn't seem too bleak for French data processing. First of all, France has a strong telecommunications industry. And secondly, the government obviously intends to develop this sector.

These bright young men in data processing, whom we are going to introduce in this article, who have accepted the challenge of developing new products and facing prestigious foreign competitors, all established their company within the past 6 years (this was a criterion set by L'USINE NOUVELLE for this report). Rather relaxed in appearance--the trademark of a generation at home on a university campus--nothing at first glance would tend to set them apart from other researchers. Much more at ease in front of a computer console than behind a desk, they seem surprised that we would want to photograph them. Is that false modesty? Not really. Like all leaders who have just established their own business, what they are doing comes before what they are. And when they start to talk about technological innovations, the words just pour out.

In terms of office decor, reality goes beyond fiction. In large, white-walled rooms, these directors of data processing companies manage their small staffs. They know that the size of their company is one of the determinants of their success, and a guarantee of their competitivity, even though a good number of their clients would like to see them grow and increase the work they will take on. "There is no possibility of that," says Jacques Homo, the P-DG [President-Chairman of the Board] of CEFTI [French Remote Data Processing Company]. "Our staff will not get any larger than 20 people, the critical threshold for working together. Also, in a time of crisis, it is essential to control our expansion." This is a decisive opinion, but one that is shared by many of these people, who favor business on a human scale.

While government and university labs serve as a breeding ground for the creators of data processing firms, some companies also offer a favorable climate for people who want to move ahead. For example, when Georges Cottin in 1975 decided to create MBC Alcyane, he spoke to people at Hewlett-Packard, where he had worked for 4 years. They were not themselves interested in microprocessing, but they encouraged him and gave him lots of advice.

This attitude favors good working relationships later. Daniel Picard in 1979 was sales director for Computervision in southern Europe; this company is the world leader in CAO. At that time he did a market study for Electrobel on the establishment of a CAO and micrographics service company. Daniel Picard, who is now president of the SIG [Computer Graphics Company], says: "The Belgian company then asked Computervision for me. There wasn't anything secret about this; it was a frank and open discussion, in which we looked for solutions. So it wasn't exactly a job change."

This type of relationship is still relatively rare in Europe, even though for the past year or two there has been more understanding shown by large companies to people who leave them to set up their own firm. But it is often the difficulties a company is going through that cause the greatest offshoots. The case of CDV Electronic is illustrative.

This company grew out of a reorganization of Logabax. In May 1981 the first French manufacturer of minicomputers decided to close its plant in Toulouse (which handled 70 percent of its production). The staff then refused to accept the 120 layoffs.

They occupied the plant and prevented the transfer of its equipment to the Paris region. After doing a study of the French market and making contacts with potential clients, two Logabax engineers, Christian Viguerie and Christian Decool, decided to set up "their own shop." So now 80 percent of their work is subcontracted from the new Logabax company.

But wherever they come from and whatever their plans may be, these young innovators, rather than financial backing, had only the encouragement of the government and sometimes the moral support of the companies or research centers they were leaving. So they had to make their own way, a way off the beaten track.

In 1975 when Daniel de Pinho decided to establish Minotec at Labege, near Toulouse, he was looking for a job and all the money he had was 10,000 francs. But Daniel is a true builder at heart. He built everything himself, even down to the very walls of his company! "If you want to get started," he says, "it is better to have friends in industry. I didn't have any financial backing, but a good many companies in the region helped me out. One of them lent me office space, and another let me use their office staff." Today his company has 30 employees and its sales volume grew from 5.7 million francs in 1980 to 10 million in 1981.

Avoiding Going Faster than Resources Allow

Some of these new companies, 2 or 3 years after solving their initial financing problems, have to look for additional financing in order not to fall victims to their own growth. That has been a major problem for Jacques Homo, the head of the CEFTI. "As paradoxical as it may seem, now we have to slow down our expansion, for it sometimes goes faster than we would like, and faster than our resources allow us to go." In data processing even more than in other fields, rapid growth demands painstaking management. Especially in a case like Symag's, which grew from 2 million francs in 1980 with four employees to 30 million in 1982, with a payroll of 35! In such a case, an appeal to new financial partners is necessary. The 20,000 francs amassed by the founding associates in 1979 were no longer enough to handle such growth. As a consequence, the founders no longer hold a majority interest in the company, but their decisive role in the design of the products still lets them keep complete control of development.

The more successful these new companies are, the more interesting they look to the big names in computers and electronics. In many instances, this has been one of the prices paid for innovation. While in the United States, the trend is to sell their newly created company for as much as they can get, in France most of these company founders fight to hold on to it. But not always! Behavior changes. That is a matter of generation, and also of realism.

So, a few months after the founding of the company in 1979, and after getting off to a promising start, Datavision lost two big contracts. That was a harsh blow; they needed to find money. "One morning in the summer of 1980, the phone rang. It was Matra calling. They had a software company at Velizy. This was great for us, because of their complementarity and the field for experimentation they could offer. The ANVAR [National Agency for the Valorization of Research], which then held 40 percent of the Euclid software, sold their stock back to Matra, which now holds 51 percent," explains Michel Theron, who is today president of Matra-Datavision.

While these PMI [Small and Medium Industries] in data processing do take risks, they don't go out of their way to find them. In terms of products, they tend to be rather cautious. Of course, they do innovate, but not systematically. In any event, in data processing, innovation most often means developing already existing products. So they are constantly collecting technological data both in France and abroad.

With this in mind, an annual trip to the United States, most often to California's Silicon Valley, has become essential for many people. They can never anticipate enough: "During my last trip to the United States 2 months ago, I became aware of some new technologies which will reach the French market in 2 years," says Christian Deccol of CDV Electronic. For the same reason, he also attends German and Japanese industry shows.

Developing existing systems to the utmost is a major concern of these PMI in data processing. The method is both simple and effective. It is a matter of placing products in high-impact markets, using networks to sell them, and developing exports.

Even though data processing is developing rapidly, some areas are having an even more spectacular expansion. This is true of microprocessing, services, automation, and maintenance. This listing also has a corollary: training requirements grow at an exponential rate.

Companies such as Symag, Axel, and Scribtel are in a good position to meet the developments in microprocessing and appropriate services (software). The more the market grows, the more they can expand.

Scribtel, which was founded in 1979, has had its sales increase from 1 to 5 million francs by 1982. The explanation for this growth lies in the fact that after first concentrating on subcontracting data processing jobs, in January 1981 the company decided to move into office automation systems. Today it has become one of the leading office automation specialists.

This concentration on various sectors of activity is quite impressive, but it does remain rational. On 1 January 1982 Alain Dessein established, in cooperation with a company in Nice, MIS, Micro-Expansion. The objective: to bring to microprocessing a powerful operating system, a hard disk with an incorporated safeguard, and the possibility of a multi-position operation. Alain Dessein wants nothing more and nothing less than to bring microprocessing to the level of efficiency and performances that has been reached by miniprocessors.

"We can say that our goal has been reached, since the Apple II with the M/DOS 65 02 interface, connected with a Galaxian 140 hard disk has brought this system to a level much higher than what is possible with a great many minicomputers, especially if we include the multi-position extension possibilities," says Alain Dessein, with both precision and pride. Dessein is a little disappointed, despite the success of this system, with 70 disks sold in 3 and a half months. The Lyon-based firm was aiming at the PME [Small and Medium Business] market. But 80 percent of these hard disks are being used in big companies. So, though the target was not hit, the company has had a commercial success.

Another favorite sector for these new companies is automation. "We are working on computer systems for continuous casting in metallurgy and on computer management systems for production in mechanical and electrical industries," says Claude Otrage, the head of Apsis , one of the leaders in computer engineering specializiing in high availability systems.

Apsis is developing multiple systems (both hardware and software) designed so that a component failure is an expected occurrence. "In 1974 Telemecanique asked me to develop such systems using the Solar minicomputer. There are now over 100 models of these systems operational. These systems are not yet within the reach of all businesses, but we are confident that less expensive products will be available in the mid term, and we may be involved with their development," adds Claude Otrage.

Still in the field of automation, a Grenoble company with a staff of 25, Telematique, which was established in 1978, is working on the automation of manufacturing processes. Its engineers have already set up in industry automation systems ranging from very simple to highly sophisticated systems, using a digital computer. They have also designed and developed a control module for some motors.

Despite their imagination, the expansion of such companies is limited by the narrow bounds of the French market. "We have reached levels of the domestic market that can hardly be increased. So growth will depend on exports or on diversification. The market for computer simulation, for example, is one such area," says Michel Predon, the head of the Grenoble center of the CERCI [expansion unknown]. The mission of this Jeumont-Schneider subsidiary is to provide the supervision system for the Themis solar power plant.

Microprocessing and automation offer some real possibilities for expansion. And the fields of maintenance and training have even greater potential.

One of the essential characteristics of these PMI is that they are flexible. They know how to adapt and to take advantage of hidden resources. For example, working in collaboration with big companies and technical centers enables them to develop adapted products, to establish good commerical credentials, and to use the support of a well known iamge.

One of the first clients of the RSI [expansion unknown] was the French Shell company, for which the RSI founders had worked on the development of a refinery simulator. Other contracts then followed, either for the same client, for the modelization of a boiler system and the energy network of a refinery, or for the research center of Elf and the French Petroleum Institute, developing optimization software in a total energy management program.

In 1975 Daniel de Pinho founded Microtec. A year later he developed a computer that can handle the manufacture of photo envelopes. His market: photographic development labs. "Today my equipment can handle the manufacture of an envelope in 3 seconds," explains Daniel de Pinho, who is more interested in well "targeted" products than in larger markets.

For the past 18 months, Microtec has been getting into something big. Working with a group of textile companies on an automation project for weaving machines, it has discovered both the size of the market--a million looms all over the world--and the absence of any competitors. How could they help being enthusiastic when orders are already coming in (with the aid of the plan to modernize the French textile industry) even before the product is ready?

The final condition for success, and not one of the least important, is exports. Some time ago, the government criticized the French computer companies for their hesitation in dealing with foreign markets. Today the government is preaching the virtues of going back to the domestic market. "Nonsense," say people in computers, "France accounts for only 5 percent of the world market. And this market, which is really quite modest, is already crowded." So, not paying too much attention to the government's suggestions, they didn't wait for the reports on electronics to venture into foreign competition. Some are even moving successfully against some of the most prestigious computer companies in the world. For example, Matra-Datavision has no hesitation about listing its main competition in CAO: IBM, General Electric, and Computervision.

Exportable computer-related products are not in short supply. In some areas, France's technological advance is well recognized. "Speech synthesis and voice recognition may become export products. We have established contacts in the United States, Canada, and the Federal Republic of Germany to handle the distribution of our products. We are the only ones anywhere in the world to have developed a recognition card for isolated words. We also have a synthesis card for the same price as those offered by our American and Japanese competitors, but ours has better performances," says Michel Verel, the head of Wecsys.

Indirect exports, another method used, can produce sales all over the world and thereby strengthen the company's credentials in the domestic market. This is done by taking part in major contracts. Apsis, a computer engineering company which specializes in the development of real-time systems and products, a company headed by Claude Otrage, is concentrating on a small number of systems. Others grab an opportunity as it comes along.

For X-COM, a Grenoble company founded last year, this opportunity came with the "Mundial," the world soccer championship. The company signed a big contract with the Spanish radio and television system to supply and install teletext message composition and broadcasting equipment for an Antiope type of system. This system enabled television viewers to have printed information available on their television screens, information that could be constantly updated.

No market can be ignored, and even though one big contract is certainly welcome, it may not be enough to base an export policy on. Symag is aware of this. With its top of the line business microcomputers, it is in competition against Apple and Tandy, the two big names in microcomputers. And yet, this is a realistic attempt, since the market for business microcomputers is relatively uncrowded, in comparison with the market for personal computers. In 1981 the company made 20 percent of its sales in foreign markets, with sales in Italy, Switzerland, Belgium, and in the Soviet Union.

A recent contract for 4 million francs is for the delivery of 13 microcomputers in the 4000 series to North Yemen for its telephone service.

"We are trying to grow gradually, for we are still too little to move into the American market. Anyway, we prefer to have 30 percent of the North Yemen market rather than 0.002 percent of the market in the Federal Republic of Germany! The Third World is a new market, and so it is very open, and we have the best advantage for getting into that market: the quality of our service," points out Louis Balme, who at the age of 31, is the head of Symag. By the end of 1982, 30 percent of Symag's sales will be from exports; this is 10 percent more than last year.

Still in the field of microcomputers, but this time at the lower end of the line, Axel is now completing a new generation, 16-bit microcomputer to sell for 12,000 francs. This is a market of some interest, for it is relatively uncrowded. The international ambitions of the head of Axel, Georges Cottin, have no bounds. He has no hesitation about competing with the U.S. market. His 5 years of experience with Hewlett-Packard France let him get to know the Americans well and he has designed a method for moving into the biggest market in the world. "I decided to get into the U.S. market through the back door, so I wouldn't become known as 'the foreign competitor'," he says.

Establishing a presence in Silicon Valley, having a representative there and buying components is essential. Afterwards, sales can begin. "Also," adds Georges Cottin, "I only sell the floppy disk which is adaptable to all machines. Today they buy one part of my product. In October, I will offer its extension, the microcomputer itself." Now that he has established a "technical community" with the Americans, Axel must now establish himself in a "commercial community."

The U.S. market is an object of desire for many people in computers. Syseca, after solidly establishing its software (Socrate) in France, is now moving into the United States. "But our ambition is not restricted to the U.S. market," points out Georges Beaume, the head of the Syseca group in Grenoble, who also speaks of the markets in Abu Dhabi and Gabon.

Another method of moving into foreign territory is to establish subsidiaries. In 1981, 34 percent of Matra-Datavision's business was in the export market. Today its foreign sales figure stands at 50 percent, excluding subsidiaries. Subsidiary--the word is now out. "As soon as we have two clients in a foreign country, we open a subsidiary. So now we are present in the United States, in the Federal Republic of Germany, the United Kingdom, and Italy. In early 1983, we will open a subsidiary in Japan," Matra-Datavision says, which is now moving into a new phase.

Let there be no mistake about it; it is the world market which interests these young men. At any rate, they really don't have a choice, for to win back the domestic market they will need some foreign contracts. Also, their products must be adapted to the world market!

France doesn't lack ideas, particularly ideas about computers and related products. Jean-Luc Lagardere, the head of Matra, who last May issued an "appeal" to innovators, received 1,150 proposals for microcomputer projects. And not everyone answered! One of these was Jacques Deconchat, a math professor at Limoges and a computer enthusiast. This electronic game fan (he has just published two books on games adaptable to a programmable computer) has a secret dream: to compete with the Japanese in industry. "I intend to make contacts with industry," he explains, "for in the present electronic game market, games requiring thought are rare. All of them are based on physical reflexes. And we could make intelligent games."

There is no shortage of ideas or of people, and they are highly motivated. A new generation of industrialists is now being born in France's computer industry.

"Brain Valley"

At Meylan, 5 kilometers from Grenoble, 2,600 people are working in the ZIRST [Area for Innovation and Scientific and Technical Developments], which covers 60 hectares. Its promoters took as their model Boston's Route 128 which has several hundred innovative companies established there. Its unique purpose is to house primarily companies oriented toward innovation and the advancement of research. Most of the 65 industrial units established there design products in related areas (electronics, computers), and sometimes compete with each other.

But competition does not exclude sharing and ongoing exchanges. It is true that they all know each other and watch each other, and competition has been transformed--a real sort of alchemy--into stimulation.

Another special feature established by its creators is control over the companies established there. Not everyone who wants to move in there can. The potential candidate's application is submitted to a selection panel on which some of the heads of companies in the ZIRST sit. They must evaluate the level of technology and innovation of the applicant.

Although more modest in size than its American counterpart, the French "Silicon Valley" (by analogy with California's Silicon Valley), continues to expand. It has just added another 10 hectares, which testifies to the ferment in computers and electronics in France.

Another innovation in management is an attractive formula for renting office space and industrial buildings. This lets some companies with limited financial resources minimize their risks. Through this "a la carte" rental system, a good number of data processing companies in the Meylan area have been able to add to their office space as their companies have grown.

The "coronation" of the ZIRST came last year. In 1981 the CNET [National Center for Telecommunications Research] moved into the area, occupying 8,000 m^2 of space. Of its 300 employees, 160 work on software. The CNET-Norbert Segard does research and development on printed ciruits. Starting in 1985, it should move toward micron and submicron technologies, so that fast complex circuits can be developed. In addition, the CNET does research on equipment and technologies related to these new procedures. "This is a real success in futuristic architecture; it is the pride of the ZIRST," says one company director, adding with a wink of the eye: "It is also the external sign of the possibilities for financing that the government has."

The Offspring of the SEMS

With the SEMS [European Miniprocessing and Systems Company] and Hewlett-Packard, the Grenoble region houses two of the four plants in France that make minicomputers. There are 500 people at Echirolles and 200 at Crolles, making up the staff of the SEMS, which manufactures various lines of minicomputers.

1975, the year when the French data-processing industry was reorganized, certainly brought about a great many changes. The SEMS is the result of the merger of the minicomputer divisions of Telemecanique and CII-HB. Thomson, the main stockholder, wanted to make Echirolles the industrial and technical center of the SEMS. But the personnel at the plant opposed that decision. The engineers did not want the Echirolles facility to become an independent decision-making center including research, production, marketing, and sales.

At that time some of the engineers decided to set up their own companies. So Apsis, Peripherique Assistance, X-COM, and Telematique are all located just a few kilometers away at the ZIRST in Meylan. In most cases, part of their staff went with them. They are on good terms with their former employers, even developing complementary products. And in some cases, they even have their old employers as clients.

ANVAR, Support for Data Processing

The July 1979 reform made of the ANVAR a mechanism providing support for innovation. This organization has now strengthened its regional orientation. Starting in the summer of 1981, its regional representatives can now grant aid of up to 1 million francs. Its mission is also to bring together laboratories and companies, isolated inventors and innovators.

The new industries moving into data processing have often relied on ANVAR's services as a financial backup. And ANVAR has also enabled some older companies to get their second wind by creating new products. For example, Subra, a distributor of laboratory equipment in Toulouse, has since 1980 been producing equipment to study the viscosity of liquids. The prototype for this equipment was developed by the University of Toulouse. For this operation, the ANVAR helped by bringing the parties together and providing financing. It was also through the assistance of ANVAR and the arrival of a data processing specialist that Ruggieri (a fireworks company) developed its Promic-System, which varies the speed of AC motors, and thus brought about its diversification to data processing activities.

7679
CSO: 5500/2359

BRIEFS

EXPERIMENTAL DATA BANK--A pilot experiment in telematics, unique of its kind at the national level, has just been started in the Centre region at the initiative of the regional chamber of commerce and industry (CRCI), and of the New Republic of Centre-Ouest. With the exceptionally strong support of the General Directorate for Telecommunications, it concerns the enterprises of the region, and by next spring will result in the installation of 300 terminals (of which 150 in Indre-et-Loire and 140 in Loiret). The user enterprises will be connected by a simple telephone line to a central computer installed at the Tours Operations Directorate for Telecommunications, whose memory will have a data bank that contains economic, financial, legal, and practical information, stored and updated daily by CRCI and the New Republic. The experiment, which will continue for one year, will be capped by a telematics test aimed at the public, with New Republic installing two terminals at its agencies in Orleans and Tours, while awaiting the arrival at the center, of the electronic directory which will open the field of telematics to all private parties. In associating themselves with this experiment, CRCI as well as the Tours daily paper, have combined two complementary areas of expertise. The chamber of commerce is in direct contact with industry and knows its needs better than anyone, while New Republic, an information specialist, finds an application of the multimedia strategy that it pursues, wishing to be a part of the changes that are taking place. [Text] [Paris LES ECHOS in French 23 Sep 82 p 10] 11,023

JEUMONT-SCHNEIDER DIVERSIFIES--Jeumont-Schneider (of the Empain-Schneider group, with 3 billion in CA [turnover], and 15,000 employees), is increasing its diversification into electronics. Now, after its work on telephone systems, the group is moving into office automation. Two agreements (which have just been approved by the government) will further this strategic decision. Jeumont-Schneider has assured itself of its control of the appropriate technology by purchasing shares in the U.S. company, Micro-Five, and it is obtaining a commercial network by joining in association with the French SSCI [Company for Service and Consultation in Data Processing], SG 2. [Text] [Paris L'USINE NOUVELLE in French 16 Sep 82 p 85] 7679

CSO: 5500/2359

DIRECT BROADCAST TV SATELLITE PLANNED

Madrid ABC in Spanish 20 Sep 82 p 56

[Article by Agustin del Moral]

[Text] The difficulty in covering Spainish territory with the RTVE [Directorate General of Radio Broadcasting and Television] network of relays due to orographic problems has caused the responsible officials to start preliminary studies on an ambitious project of direct radio transmission by satellite.

The high frequencies which are normally needed to transmit TV signals cause difficulties in their dissemination in that they are unable to get past obstacles. For this reason the range of a repeater is virtually limited to the line of sight and for this reason mountainous areas and towns located in hollows and valleys are blocked off from the repeaters. In order to achieve an effective network which covers each and every town, village or neighborhood, one would have to locate a repeater on every hill or on almost every hill, which would mean a high cost for installation and especially a high cost for maintenance.

For this reason RTVE is considering a very ambitious solution which in the long run would be much cheaper and more effective. It would be something like hanging a repeater from the stars. It would be in an orbital position which would coincide with the one assigned to Portugal, Great Britain, Ireland and countries of the African cone by the ITU [International Telecommunications Union] Conference in Geneva.

This system has something of a precedent in the United States where there are in operation more than 2,000 ground stations which receive the signal by satellite and distribute it by cable to more than 5 million homes. Some handymen users have built their own antennas and receive the signal directly in their homes.

Spainish Technology

The Spainish satellite will use Spainish technology. This is not the first time that Spain has launched herself into the adventure of space. It will be recalled that INTELSAT was the first satellite of Spainish design and manufacture.

It was manufactured with the cooperation of Aeronautical Construction [Construcciones Aeronauticas] and Standard Electric [Standard Electrica] under the direction of INTE, the Aerospace Technical Institute.

The Electric and Information Division [Division de Electrica e Informatica] of the National Industrial Institute is participating in this project of direct radio transmission by satellite through its enterprise Piher Electronica which is working on the development of the technology applicable to the Spainish direct TV satellite which will be tried out in the Prosat project. This project serves, by satellite, the communications network for movement by air, land and sea.

The technology which was developed for the Prosat project would not only be usable but can also be improved by the miniaturization of that equipment, made possible by the increasing integration of electronic components.

On TV channel 2 transmission is at a frequency of about 54 MHz which is equivalent to a wave length of 5 meters. If this, which is the greatest wave length used in the transmission of TV signals, has difficulty in getting past obstacles, the UHF, which are 10 times smaller, that is, less than 1/2 meter, have even more difficulty. They require a relationship between transmitter and receptor which is even closer to the line of sight. Obstacles which could be overcome on the VHF cannot be overcome on UHF. Herein lies the big advantage of having a transmitter at such a height that it would be visible from all points in Spain--visible, in the figurative sense, since at a height of 34,000 km at which it would be fixed in a geostationary orbit on the equator, one would have to have exceedingly good eyesight in order to see it. As a very simple reference for approximating its position, one could say that it would be in a southerly direction and 4 or 5 hours above the horizon, measuring each hour as the width of one's hand with one's arm outstretched.

Although the waves sent from the satellite appear not to encounter obstacles in reaching the ground, in reality they can be weakened by large raindrops or hail pellets of approximately the same size.

In any event, these minor difficulties are neither so many nor so frequent as to nullify or occasion the slightest objection to the system of TV directly from a satellite which is much superior to the ground systems.

New Antennas

The difference in size between the VHF and the UHF antennas is due to the wave length in which they are transmitted. With direct TV, when the frequency is changed, the antennas will of course have to be adjusted and made the proper size in keeping with the new wave length and also the strength of signal one wishes to obtain.

There will be a charge to the user who prefers or needs to use the direct signal, depending on the degree of community participation or the amount of subsidy obtained. A parabolic receiver could be installed in a town or neighborhood and then the transmission could be sent by cable to the various homes, retransmitting it at a frequency that is accessible to present television sets. Many solutions will surface in due course among which, of course, is the one which the very name of the system suggests: the installation of an individual parabolic antenna which carries the signal directly to the television set, but in this case the set should have the capacity to receive the higher frequencies. The new television sets, which are in the stage of being researched by the specialized firms of INI [National Institute of Industry] RTVE and the TS School of Telecommunications Engineers will be similar to present sets in price.

9204
CSO: 5500/2509 END

JPRS 82331

26 November 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 249

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 82331

26 November 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 249

CONTENTS

ASIA

NEW ZEALAND

State Urged To Resume Financial Support for Peacesat
(THE EVENING POST, 16 Sep 82) 1

Telephone Exchange Software Based on Japanese Know-How
(THE EVENING POST, 8 Oct 82) 2

PAKISTAN

Telephone Exchange in Karachi Suburb Inaugurated
(MORNING NEWS, 22 Oct 82) 3

Briefs
Microwave Relay System Approved 4

PEOPLE'S REPUBLIC OF CHINA

Microwave Television Circuit Opens in Fujian
(XINHUA, 27 Oct 82) 5

Guizhou's Television Broadcasting
(Guizhou Provincial Service, 3 Nov 82) 6

Briefs
Hunan Posts, Telecommunications 7
Shandong Communications Undertakings 7

VIETNAM

Briefs
Radio, Television Role 8

EAST EUROPE

BULGARIA

Quality of First Bulgarian Color TV 'Sofia-81' Discussed
(Lyubima Buchinska; ZEMEDELSKO ZNAME, 16 Oct 82) 9

LATIN AMERICA

HONDURAS

Briefs

Satellite Ground Station 11

NEAR EAST AND NORTH AFRICA

INTERNATIONAL AFFAIRS

Syria Said 'Jamming' TV Reception in North of Israel
(Jerusalem Domestic Service, 7 Nov 82) 12

AFGHANISTAN

Ministry of Communications Getting New Building
(KABUL NEW TIMES, 20 Oct 82) 13

Transmitters To Boost Radio Kabul Broadcasts
15

ALGERIA

Postal Service, Telecommunications Projects Reviewed
(EL MOUDJAHID, 6 Oct 82) 16

IRAN

Briefs

Television Relay Station 19
Manshad Television Relay 19

LEBANON

Briefs

French Telecommunications Study 20

UNITED ARAB EMIRATES

Expansion of Radio Network Reported
(OPECNA, 21 Oct 82) 21

SUB-SAHARAN AFRICA

NIGERIA

Role of Various Radio Stations Spelled Out
(Folu Adelaja; NEW NIGERIAN, 22 Oct 82) 22

Briefs
Radio, TV for Kano 23

SOUTH AFRICA

Briefs
Optical Fibre Plant 24

SWAZILAND

Second Broadcasting Channel
(James Dlamini; THE TIMES OF SWAZILAND, 12 Nov 82) 25

TANZANIA

EEC Seeks To Improve Tanzania-Madagascar Communications
(Charles Kizigha; DAILY NEWS, 26 Oct 82) 28

ZAMBIA

Transmitter To Counter South African Radio Dominance To Be Installed
(TIMES OF ZAMBIA, 5 Nov 82) 29

Briefs
Telephone Communications Cutoff 30

WEST EUROPE

FEDERAL REPUBLIC OF GERMANY

Cable Television To Receive Public, Private Funding
(FRANKFURTER ALLGEMEINE, 23 Oct 82) 31

Bonn Gives Go-Ahead for Cable Television
(DER SPIEGEL, 25 Oct 82) 33

Briefs
Finland Joins Eutelsat 36

FRANCE

Thomson Eyes 30 Percent of Domestic Telecopier Market
(ZERO UN INFORMATIQUE HEBDO, 27 Sep 82) 37

Velizy Project Causes Questions on DGT Role in Telematics
(Eric Sorlet; ZERO UN INFORMATIQUE HEBDO, 18 Oct 82) 39

Lille Fiber Optics Program Begins Testing
(Gerard Braz; LES ECHOS, 20 Oct 82) 42

Briefs

Alsthom Subsidiary in Brazil 44

SWEDEN

Swedish Earth Station for International Telecommunications
(NORDISK INDUSTRITIDNING, No 2, 1981) 45

STATE URGED TO RESUME FINANCIAL SUPPORT FOR PEACESAT

Wellington THE EVENING POST in English 16 Sep 82 p 14

[Text] The Communications Advisory Council wants the Government to resume its financial support for the Peacesat satellite system.

In a report prepared at the request of the Minister of Science and Technology, Dr Shearer, the council chairman, Mr Alan Burnet, said the $20,000 needed could justifiably be split among three expenditure votes — education, foreign affairs and science and technology.

Link-up

The Peacesat satellite system links 18 countries in the Pacific Basin, covering Polynesia, Melanesia, Micronesia and Australia.

The council also recommended:

- That Peacesat funding in New Zealand be continued for the life of the satellite, expected to be until the end of next year.
- That Peacesat organisation be urged to consider transferring its activities to the international public telecommunications network on the expiry of the satellite.
- That Dr Shearer discuss the diplomatic aspects of continuing Peacesat funding in the short term with the Minister of Foreign Affairs, Mr Cooper.

In a response to the report, Dr Shearer said today he would take up the recommendations both with Mr Cooper and the Minister of Education, Mr Wellington.

Objections

The council's study began this year after objections to a Government decision to withdraw the $20,000 needed to run the New Zealand terminal, a cost which had previously been met by the education vote.

The council noted that Peacesat (Pan-Pacific Education and Communication Experiments by Satellite) developed out of a trial which began in 1971, between the University of Hawaii and the Wellington Polytechnic.

16 years

In its 16 years of operation, Peacesat has blossomed into a network with terminals in 18 countries, and is now used for distance teaching, programme administration, consultation with experts, cultural exchanges, and emergency coordination.

The Wellington terminal has catered for as many as 70 organisations during any one year, and has assisted educational, scientific, agricultural, religious and social welfare interest groups.

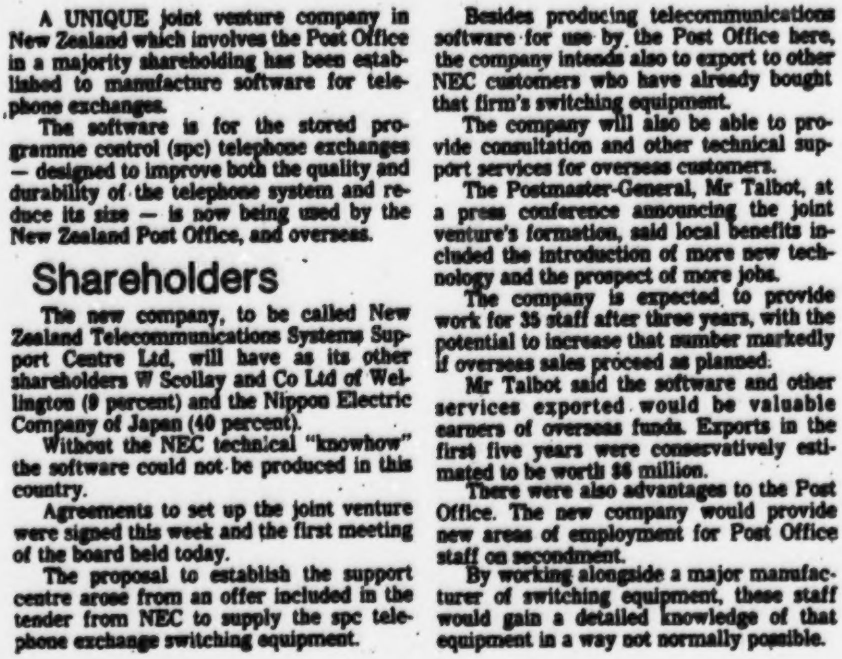
The council concluded that Peacesat has developed a particularly valuable organisation for exchanging information in the Pacific Basin and there should be encouragement for the class of activity developed to continue and expand.

CSO: 5500/9040

TELEPHONE EXCHANGE SOFTWARE BASED ON JAPANESE KNOW-HOW

Wellington THE EVENING POST in English 8 Oct 82 Sec 2 p 16

[Text]



A UNIQUE joint venture company in New Zealand which involves the Post Office in a majority shareholding has been established to manufacture software for telephone exchanges.

The software is for the stored programme control (spc) telephone exchanges — designed to improve both the quality and durability of the telephone system and reduce its size — is now being used by the New Zealand Post Office, and overseas.

Shareholders

The new company, to be called New Zealand Telecommunications Systems Support Centre Ltd, will have as its other shareholders W Scollay and Co Ltd of Wellington (9 percent) and the Nippon Electric Company of Japan (40 percent).

Without the NEC technical "knowhow" the software could not be produced in this country.

Agreements to set up the joint venture were signed this week and the first meeting of the board held today.

The proposal to establish the support centre arose from an offer included in the tender from NEC to supply the spc telephone exchange switching equipment.

Besides producing telecommunications software for use by the Post Office here, the company intends also to export to other NEC customers who have already bought that firm's switching equipment.

The company will also be able to provide consultation and other technical support services for overseas customers.

The Postmaster-General, Mr Talbot, at a press conference announcing the joint venture's formation, said local benefits included the introduction of more new technology and the prospect of more jobs.

The company is expected to provide work for 35 staff after three years, with the potential to increase that number markedly if overseas sales proceed as planned.

Mr Talbot said the software and other services exported would be valuable earners of overseas funds. Exports in the first five years were conservatively estimated to be worth $6 million.

There were also advantages to the Post Office. The new company would provide new areas of employment for Post Office staff on secondment.

By working alongside a major manufacturer of switching equipment, these staff would gain a detailed knowledge of that equipment in a way not normally possible.

CSO: 5500/9040

TELEPHONE EXCHANGE IN KARACHI SUBURB INAUGURATED

Karachi MORNING NEWS in English 22 Oct 82 p 7

[Text] City Mayor Abdus Sattar Afghani yesterday inaugurated the newly built 1,200 lines Telephone Exchange at Keamari at a cost of Rs 14 million.

Speaking on the occasion, Mayor Afghani felicitated the Telephone Department for providing telephone facility in the area which is backward as compared to other parts of the city. He also hoped that the Telephone Department would also meet the genuine requirements of other parts of the city.

He further hoped that the Telephone Department would provide new telephone connections to over lakh pending applications in city.

Mayor Afghani also asked the Telephone Department to expedite the work of Lyari Telephone Exchange so that the inhabitants of this backward area could also be benefited by this facility.

Chairman KPT, Rear Admiral M. I. Arshad speaking on the occasion underlined the importance of discipline in public dealing departments so that better service could be provided to the people.

He said that the only reason of non-expansion of telephone lines was due to the inefficient maintenance of machineries.

Welcoming the chief guest, the general manager, Karachi Telephone Region (KTR), Syed Irshad Hasan said that Keamari Telephone Exchange is part of the annual development plan of the KTR under which 25.000 new telephone connections will be provided in Karachi.

Mr Hasan said anyone who wants to have telephone connection in Keamari can get it immediately as only 500 subscribers have applied so far.

He said during the current financial year 2.000 telephone connections will be provided every month in the city.

Later, Mayor Afghani gave away certificates to Sub-engineer Mr Mahmood Ali. Engineering Supervisor (West three division), Syed Ahmed. Raza Abidi and Engineering Supervisor (Development division) for their efficient work.

CSO: 5500/4308

BRIEFS

MICROWAVE RELAY SYSTEM APPROVED--Quetta, Oct 30: The Federal Government has approved installation of microwave radio relay system for coastal areas of the country. It will cost Rs. 160 million and take about three years to complete. An official spokesman told our representative that under this system microwave telecommunication facilities will be provided between Karachi, Uthal, Ormara, Pasni, Gwadur, Jewani and Turbat. The system will also provide telephone channel for 960 telephones and TV channel for coloured TV relay with associated sound channel. There will also be stand-by channels for TV and telephones.--PPI [Text] [Karachi DAWN in English 31 Oct 82 p 4]

CSO: 5500/4308

MICROWAVE TELEVISION CIRCUIT OPENS IN FUJIAN

OW290155 Beijing XINHUA in English 0826 GMT 27 Oct 82

[Text] Fuzhou, October 27 (XINHUA)--China's first across-sea microwave television circuit has opened in Fujian Province, serving the coastal southern part of the region, according to the Provincial Broadcasting Administration.

The 303-kilometer circuit originates at the Fujian TV station in Fuzhou, provincial capital, and transmits to Xiamen, with seven microwave stations in Fuzhou, Pingtan Island and other places.

Using domestically-made equipment, the circuit was designed and installed by the Provincial Broadcasting Administration.

The administration plans to extend the circuit to western Fujian and use it for radio transmission next year.

CSO: 5500/4104

GUIZHOU'S TELEVISION BROADCASTING

HK041104 Guiyang Guizhou Provincial Service in Mandarin 1100 GMT 3 Nov 82

[Text] In order to speed up the development of Guizhou's television broadcasting in a planned way, the Provincial Broadcasting Bureau held a conference to discuss technical plans for Guizhou's television broadcasting transmission networks in Guiyang 24-31 October. Participating in the conference were some 200 technicians and responsible members of broadcasting bureaus of various prefectures, autonomous prefectures, municipalities and counties. They carefully studied technical policies, technical standards and methods for planning the television transmission networks and, in light of Guizhou's reality, discussed questions concerning how to draw up technical plans for Guizhou's television transmission network, such as planned and scientific arrangements for the layout of television relay stations, channel allocation, how to avoid interference and so on.

The conference drew up plans for two television transmission networks in Guizhou, plans for relaying the two sets of television programs transmitted by the central television station and plans for a ground station to receive broadcasts via satellite. The long-term goal of the technical plans of the television transmission networks is to transmit television to about 95 percent of Guizhou's population, that is, to ensure that on the whole all the people in Guizhou will be able to watch television.

Those who attended the conference had full faith in fulfilling the task of drawing up technical plans for the television transmission networks and in realizing them. They expressed their determination to make contributions to speeding up Guizhou's television development.

CSO: 5500/4105

BRIEFS

HUNAN POSTS, TELECOMMUNICATIONS--Hunan Province has worked out a preliminary plan for developing postal and telecommunications work for the next 5 years. The total volume of business of posts and telecommunication of the whole province will increase by an average of 3.37 percent per year by 1985. The province installed 36,200 telephones last year. The number of telephone subscribers will increase from 0.77 percent per year now to 0.98 percent per year in 1985. The magnetotelephones [crank telephones] of the post offices in six prefectures have now been changed to automatic telephones. [Text] [Changsha Hunan Provincial Service in Mandarin 1100 GMT 19 Oct 82 HK]

SHANDONG COMMUNICATIONS UNDERTAKINGS--Since the third plenary session of the 11th party Central Committee, Shandong Province has accelerated the development of post and telecommunications undertakings. In the past 3 years, the province has increased the number of telephone subscribers in urban areas by 24,000, up 22.8 percent over 1978, the long-distance telegram and dialing lines by 339, up 22.9 percent, and the floor space of post offices by 2.1 million square meters. In developing communications undertakings, priority has been given to the eastern areas of Jinan Municipality. Overloaded transmission lines have decreased from 56 percent in 1980 to the present 44 percent. In 1981, with the completion of the Jinan Long-Distance Communications Central Office Building, long-distance automatic dialing services have been opened between Jinan and 22 other municipalities across the country. [Text] [Jinan Shandong Provincial Service in Mandarin 2300 GMT 23 Oct 82 SK]

CSO: 5500/4104

BRIEFS

RADIO, TELEVISON ROLE--[Interview with Ly Van Sau, vice president of Vietnamese Radio and Television, at Havana's Palace of Conventions--recorded] [Question] Comrade Ly Van Sau, what can you tell us about the role of radio and television in your country at this new stage of socialist Vietnam. [Answer--in Spanish] As you know, in our long struggle for liberation, radio has played an important role in the mobilization of our people for victory. Vietnamese television made its appearance during the war but its achievements were greatest after complete victory in 1975. At the present time Vietnamese radio and television have the principal task of mobilizing our people for the construction of socialist Vietnam and at the same time defending our socialist homeland since you all know that we are still under the threat of the warmongering and hegemonic leaders of Beijing. These are the two principal tasks of Vietnamese radio and television, that is, to construct the country and to defend socialism. [Text] [FL101920 Havana Domestic Television Service in Spanish 1800 GMT 10 Nov 82]

CSO: 5500/2016

QUALITY OF FIRST BULGARIAN COLOR TV 'SOFIA-81' DISCUSSED

Sofia ZEMEDELSKO ZNAME in Bulgarian 16 Oct 82 p 2

[Article by Lyubima Buchinska: "On 'Sofia' Television Sets and Their Future"]

[Text] "Sofia-81," the first Bulgarian color TV set remains the most sought-after product of Sofia's industry. Its production goes exclusively to the domestic market. However, the figure of 20,000 per year is still unable to meet consumer demand. Production will reach 30,000 in 1983. Work on the development and fastest possible production of a series of new color television sets equaling the latest models, is continuing on a parallel basis.

The social recognition of the high technical indicators of the "Sofia-81" TV set is the first reward for scientific and technical progress. It is the distinction of the Institute of Radio Electronics and the Kliment Voroshilov Low Tension Appliances Plant earned this year on the occasion of the freedom anniversary.

As early as 1978, when this new Bulgarian item was offered on the international market, it was able successfully to prove its qualities which are no longer a novelty although interest in this color television set has not declined. We are familiar with its esthetic appearance and picture contrast. The screen is 66 cm long and its relatively low weight of 36 kg makes it easy to move. Unlike the old television sets, its qualities do not depend on the geometric location of the receiver and the low power consumption is a prerequisite for the slower wearout of its parts. The receiver was tested for 3,000 hours of work, which means that no repairs would be required for a period exceeding 3 years.

"Our collective of specialists covered the distance from Opera to 'Sofia-81' but the pace of technical progress allows no stagnation. We are familiar with the latest world models. We shall use in our developments new integrated circuits which will reduce the share of skilled labor," we were told by Apostol Apostolov, head of the Television Equipment Section of the Radio Electronics Institute.

The color television sets are being improved with the new series of prototypes. Noteworthy among them is "Sofia-82A," which has a much more modern picture tube.

Currently the experimental production of "Sofia-83" is continuing. This model is expected to be most in demand. It will have a 56 cm long screen with a picture tube produced in Poland.

"The design collective of the institute is working on 'Sofia-84,' with a 67 cm wide screen," my interlocutor went on to say. "Its new features are the automatic switching of sound and picture, with the channel indicated in illuminated figures. New integral circuits will be applied with this model. Together with the Center for Industrial Esthetics, we are looking for better design as well. Sample production is expected to begin in June 1983."

The specialists are now working on determining the final width of the screen and the functional features of the portable "Sofia-85" model.

There are good expectations related to a larger number of new models with improved qualities of Bulgarian color television sets to be produced in 1983.

5003
CSO: 5500/3001

BRIEFS

SATELLITE GROUND STATION--A ground station for telephone communications with any country via satellite was installed in Tegucigalpa last week. The station, which will lower communication costs, has a parabolic antenna 11 meters in diameter and operates through a geostationary satellite located 36 km above the earth. It is expected that the station will begin operating in early November. Honduras is the last country in Central America to install this type of equipment. [PA011850 San Pedro SULA TIEMPO in Spanish 25 Oct 82 p 3 PA]

CSO: 5500/2014

SYRIA SAID 'JAMMING' TV RECEPTION IN NORTH OF ISRAEL

TA071016 Jerusalem Domestic Service in Hebrew 0535 GMT 7 Nov 82

[Text] For many months, the inhabitants of the valleys in the Golan Heights have been suffering interference with Israeli television broadcasts, caused by intentional jamming by the Syrians. Recently, this interference has increased. Hayim Hecht reports:

[Begin recording] [Hecht] Jumping lines, a jumble of voices in Arabic, and other distortions and noises is what the valley inhabitants get when they try to watch Israeli television broadcasts. The huge transmitter the Syrians set up in the southern Golan Neights is the cause of these disturbances. The television broadcasts from Jordan and Syria are received here with frustrating clarity, and this has been going on for many months, the mayor of Tiberias, Yigal (Bibi), says:

[Bibi] For some time now, inhabitants of Tiberias and the Galilee have been watching Jordanian and Syrian TV. They are unable to watch Israeli TV because it is simply impossible to see. The interference is very heavy.

[Hecht] Communications Minister Mordekhay Tzipori is aware of the gravity of the problem. On a visit to the area, Tzipori said he would allocate funds to set up powerful transmitters in the north in order to solve the problem. However, until the necessary funds are found, the valley inhabitants will be able to watch commentaries on current events thanks to the obliging broadcasting stations in Damascus and Amman. [End recording]

CSO: 5500/4506

MINISTRY OF COMMUNICATIONS GETTING NEW BUILDING

Kabul KABUL NEW TIMES in English 20 Oct 82 p 3

[Text] With the installation of the different technical units, national and international switching systems, long distance communication units, national and international switching boards, the microwave systems with antenna and a combmunication satellite installed in the new communications building, significant improvements are expected in the field of communications within the country and abroad.

A Communications Ministry official told the Kabul New Times reporter that the work of the new building of the ministry, which is financed from the state development budget, has progressed over 55 per cent. The building has four blocks for different sections of the ministry.

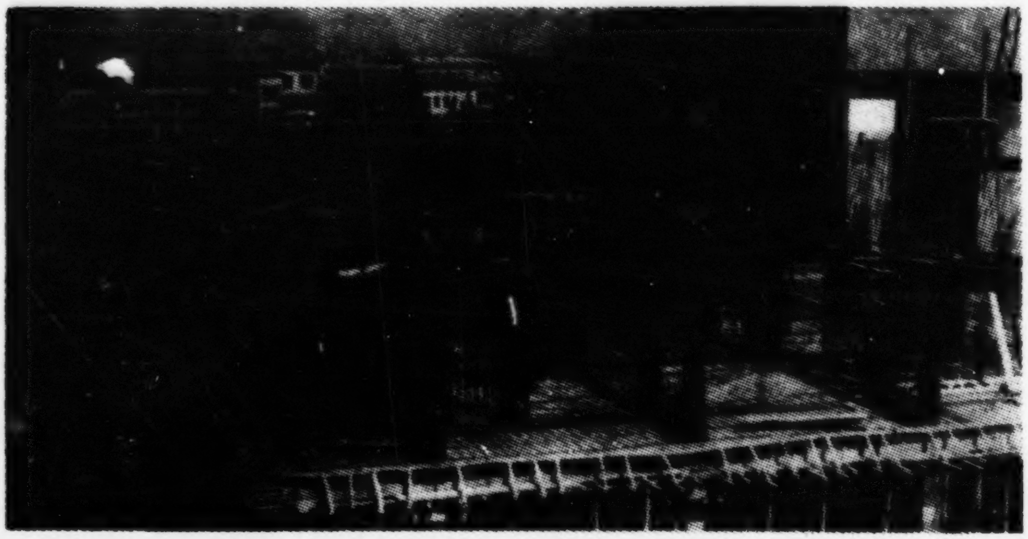
The first block in the first two floors will house the central post office.

The second, in five floors will be for the distribution and management of post, parcels and postal imports. The third block, in 18 floors, will house different technical units and administrative departments, while the fourth block will be for the various technical units.

The ministry's office space needs will be fully met with the completion of this project.

The construction works is being done by the Afghan Construction Company. Although the building cost will be determined at the end of the work, it has been estimated that about Afs 6,000 millions will be spent on this project.

Afghan and foreign engineers of the Public Works Ministry are taking active part in designing, planning and building of the new offices. The company provides building materials for the project from local and foreign markets.



The newly-built Communications Ministry building at the centre of the town.

CSO: 5500/4702

TRANSMITTERS TO BOOST RADIO KABUL BROADCASTS

LD041623 Kabul in Pashto to Europe 1730 GMT 1 Nov 82

[Text] Some five transmitter units for boosting Kabul radio programs as well as broadcasting local programs have been set up so far in five provinces of the country. This has been done in accordance with the resolution of the PDPA Central Committee Politburo.

Speaking to the Bakhtar Agency reporter, the head of the Communications Ministry Technical Department said [announcer read]: Due to the mountainous character of our country and [word indistinct] the voice of the Afghanistan radio cannot be heard well in some high regions of the country's provinces, and, on the other hand, to expand and further improve artistic talents for producing programs on local customs and traditions, it was decided, along with boosting Radio Afghanistan's broadcasts, to also broadcast local programs. Thus far five radio transmitter and broadcasting nits have been set up in the Pakhtia, Zabol, Nangarhar, Ghazni and Helmand provinces, and installation work is currently being carried out.

Answering arother question, he said: These 7-kw units and their relevant accessories have been given as grant-in-aid by the friendly and fraternal country, the USSR, to the DRA, and their construction cost in those provinces will be met by the state development budget. He added that the broadcast range of these units is 60 km during the day and over 120 km during the night.

Answering another question, the technical director of the Communications Ministry said: The 10-kw trnasmtter and local broadcast units in the Balkh, Kandahar and Herat provinces have already been set up and such units will be installed in the near future in the country's central provinces in accordance with plans in hand.

CSO: 5500/4705

POSTAL SERVICE, TELECOMMUNICATIONS PROJECTS REVIEWED

Algiers EL MOUDJAHID in French 6 Oct 82 p 7

/Article by APS: "Jijel Postal Service and Telecommunications: 2,000 Lines for Each District"/

/Text/The battle being fought by the governorate of Jijel to emerge from the centuries-old isolation which characterizes it is being waged on several fronts. The Postal Service and Telecommunications sector, along with highway infrastructure, is a favorable factor in assuring socio-economic and cultural development for this governorate, which resulted from the last administrative land division.

In the Postal Service and Telecommunications area, it is easy to recognize that the situation has definitely improved over a period of a few years, and it will be even more so in future. In 1975, for example, to make a telephone call to any part of the national territory one had to arm oneself with patience for hours on end, if not whole days, because of the difficulties within the system.

All calls passed either through the main center in Constantine or through the one in Algiers. Communications with foreign countries were also very hard to provide for the few subscribers in the city.

The efforts made in this field by the officials concerned have helped to eliminate these flagrant incongruities and make way for both qualitative and quantitative improvement in postal and telecommunications service, without which there can be no real moving ahead.

The governorate's postal and telecommunications infrastructure comprises 26 full service post offices, 7 delivery depots, and 11 branch post offices, or a total of 50 postal establishments. This infrastructure amounts to 1 office for every 10,104 residents, whereas on 1 January 1976, there existed only 30 offices, or 1 office for 17,000 residents. The branch post offices now being established or soon to be placed in service as well as 17 more planned under the first slice of the Community Development Plans (PCD) will bring the number of offices to 78, or 1 office for every 8,200 residents, bearing in mind the population increase, which is expected to be on the order of 640,000 inhabitants toward the end of the 5-year plan period.

The projects listed under the 2nd 4-year plan are either completed or in the process of being executed. The delays, according to officials of the Postal and Communications Service, are the result "of the lack of materials." Of these projects, some have been opened to the public, particularly in Zeraia, Sidi Maarouf, and Emir Abdelkader. The state of readiness of the rest varies from 40 to 100 percent, so far as the heavy construction is concerned.

The objective, according to Postal and Telecommunications officials, is improvement of the quality of service under the 5-year plan. It will take the form of development of the existing infrastructure with the goal of bringing services closer to users through the establishment of 17 branch post offices already listed in the first slice of the community development plans, the construction of a main delivery depot in the governorate capital city, and lastly, the construction of 10 full service offices to normalize and improve working conditions for the personnel of certain offices of which the premises are substandard, insanitary, or far too small. This program will affect localities such as Tiberguent, Erraguene, Beni-Guecha, Ahmed-Rachedi (Chekfa), Sidi-Abdelaziz, El-Aouana, Settara, Rouached, El-Mhad, and Beinen.

Mail delivery has also made considerable strides. At present, 57 temporary and permanent mail carriers make 57 rounds daily, amounting to 800 kilometers of travel on foot and 400 kilometers with motor transportation.

Dispatching is handled by 27 enterprises of which 24 are privately owned. The latter cover a distance of 500 kilometers a day within the governorate.

Transport of the mail within the governorate is provided by private companies, whose financial requirements are well below the funding allocated for the service. Action is being contemplated with the APC [People's Communal Assembly] in this area with a view to communal transport for postal purposes.

In the area of telecommunications, about 622 telephone subscribers were recorded in the capital city of the governorate in 1975, connected to a manual switchboard, and the district capitals had available very defective equipment inadequate to the traffic. The total number of subscribers was 1,130, or a coefficient of 0.22 stations per 100 inhabitants. At present, 6,002 main telephones, of which 33,904 [as published] in the governorate capital, are installed (or 1.18 stations per 100 inhabitants). To that must be added the supplementary telephones, numbering 1,661, at the main telephone office, and 844 in the local offices, or an overall total of 8,507 telephones placed at the disposal of users. The density is 1.60 telephones per 100 inhabitants and a degree of automation of around 84 percent (for the governorate as a whole). The degree of automation on the national scale is 90 percent.

This perceptible amendment of the situation results mainly from the completion of projects in the 2nd 4-year plan related to the placement in service of four automatic telephone exchanges in Jijel, Taher, El Milia, and Ferdjioua, two repeater stations (Jijel and El Milia), and a radio center at Ferdjioua (Djebel Trira), as well as the construction of four telephone booths to serve isolated areas and the connection of houses in the forest.

As regards telegraphy, the main center in Jijel is equipped with an automatic self-switching telegraphic system of the "TW 10" type, comprising 100 pieces of equipment and expandable to 200. For the moment, 55 subscribers and 14 special lines are connected, whereas in 1975 there were only 2 subscribers and 2 service telephones connected with Constantine.

In the course of the 5-year development plan (1980-1984), many projects in the postal and telegraphic sector will be completed in various places in the governorate, and will make it possible to respond to a constantly growing demand, bearing in mind the requirements of the social and economic development of the region.

Among these projects should be mentioned a telephone exchange in Jijel with a capability of 10,000 lines which will be installed on a 2,000 square-meter site, and two exchanges at Ouled-Endja and Ziama-Mansouriah with 500 lines each, with expansion possibilities. The same program provides for the extension of the presently existing exchanges, in Jijel, from 5,000 to 10,000 lines, in Taher and El Milia, from 1,000 to 2,000 lines, and in Ferdjioua, from 500 to 2,000 lines.

Among the difficulties experienced by the postal and telegraphic sector is to be noted the defective condition of the roads for bringing in the mail. It has not been possible to open completed branch post offices in Larabaa, Boutenach, and El-Aouadia because of this situation.

12149
CSO: 5500/4600

BRIEFS

TELEVISION RELAY STATION--As the result of the attempts and endeavors of officials to expand the network of the Voice and Vision [radio and television] of the Islamic Republic of Iran the installation of the television relay station in Tazarjan and Dehebala has been completed. From today the inhabitants of the above-mentioned regions can make use of the programs of the Vision of the Islamic Republic of Iran, channel four. [Text] [LD211620 Tehran Domestic Service in Persian 1030 GMT 21 Oct 82]

MANSHAD TELEVISION RELAY--According to the central news unit, thanks to the efforts of the expansion unit of Voice and Vision of the Islamic Republic of Iran, the installation work on the TV relay station in Manshad in Yazd was completed today. The inhabitants of the villages of Manshad and (?Banask-e Sadat) will be able to receive the programs of the Vision of the Islamic Republic of Iran on channel five, from today. [Text] [LD191547 Tehran Domestic Service in Persian 1710 GMT 18 Oct 82]

CSO: 5500/4703

BRIEFS

FRENCH TELECOMMUNICATIONS STUDY--Yesterday afternoon a French scientific delegation arrived in Beirut to study the disruptions which have occurred in the telecommunications network in Lebanon and to determine ways of repairing and developing it. Minister of Post and Telecommunications George Afram, general manager of communications Mr Edeard Abu-Jawdah and senior employees of the ministry met the delegation, which included five experts. The minister held a working meeting with the experts just before he left the airport for Saudi Arabia. The commercial attache from the French Embassy, Mr Lucien (Joffraud) participated in the meeting. [Text] [Beirut AL-NAHAR in Arabic 25 Oct 82 p 5]

CSO: 5500/4508

UNITED ARAB EMIRATES

EXPANSION OF RADIO NETWORK REPORTED

LD221318 Vienna OPECNA in English 2043 GMT 21 Oct 82

[Text] Abu Dhabi, 21 Oct (OPECNA)--A Swiss company has won a 70 million U.S. dollar contract to expand Abu Dhabi's international radio network into a world service.

The project, to be completed within 28 months, involves the construction of two transmission stations, one short wave and the other medium wave, in the Ad-Dubry'ah area 30 km southwest of here.

The United Arab Emirates minister of information and culture, Ahmad Ibn Hamid Al Nuhayyan, signed an agreement with an official of the Swiss-based Brown Boveri Company.

Under the expansion plan, the Emirates' radio service, broadcasting in four languages, will join the ranks of free radio stations covering the world.

The network will be able to operate 24 hours a day on 10 frequencies, and a scheme to broadcast in 10 languages is under consideration.

The medium wave station will be equipped with two linked 1,000 kw transmitters to cover the gulf, the Middle East, India and Pakistan, while the short wave station, with four 500 kw transmitters, will reach the Americas, Europe, West Africa and the Near and Far East.

Five new studios will also be built for transmission and programme production.

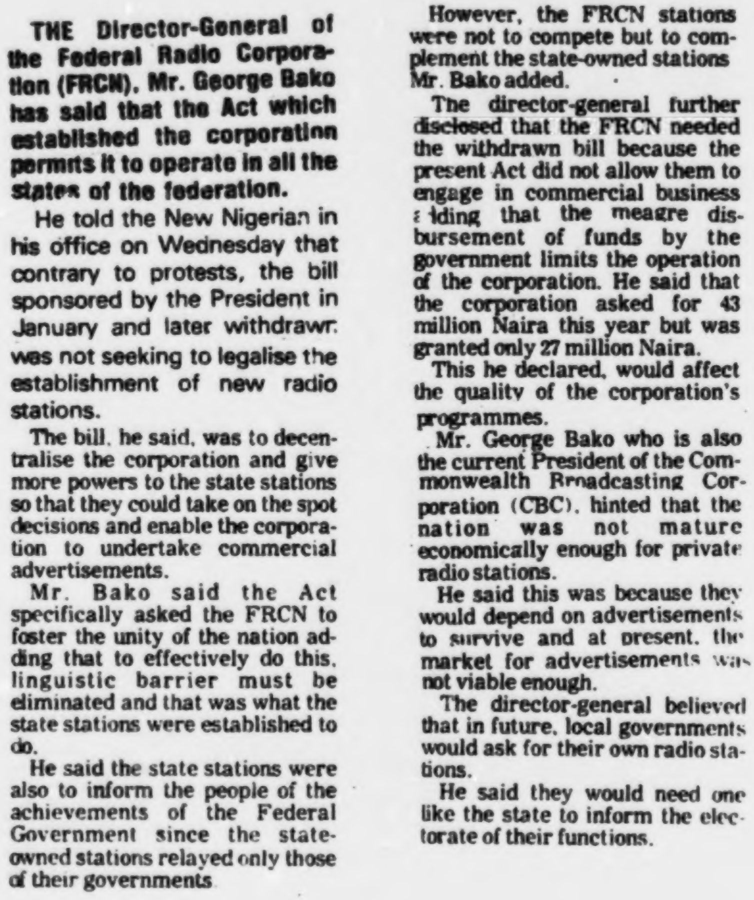
CSO: 5500/4507

ROLE OF VARIOUS RADIO STATIONS SPELLED OUT

Kaduna NEW NIGERIAN in English 22 Oct 82 p 24

[Article by Folu Adelaja]

[Text]



THE Director-General of the Federal Radio Corporation (FRCN), Mr. George Bako has said that the Act which established the corporation permits it to operate in all the states of the federation.

He told the New Nigerian in his office on Wednesday that contrary to protests, the bill sponsored by the President in January and later withdrawn was not seeking to legalise the establishment of new radio stations.

The bill, he said, was to decentralise the corporation and give more powers to the state stations so that they could take on the spot decisions and enable the corporation to undertake commercial advertisements.

Mr. Bako said the Act specifically asked the FRCN to foster the unity of the nation adding that to effectively do this, linguistic barrier must be eliminated and that was what the state stations were established to do.

He said the state stations were also to inform the people of the achievements of the Federal Government since the state-owned stations relayed only those of their governments.

However, the FRCN stations were not to compete but to complement the state-owned stations Mr. Bako added.

The director-general further disclosed that the FRCN needed the withdrawn bill because the present Act did not allow them to engage in commercial business adding that the meagre disbursement of funds by the government limits the operation of the corporation. He said that the corporation asked for 43 million Naira this year but was granted only 27 million Naira.

This he declared, would affect the quality of the corporation's programmes.

Mr. George Bako who is also the current President of the Commonwealth Broadcasting Corporation (CBC), hinted that the nation was not mature economically enough for private radio stations.

He said this was because they would depend on advertisements to survive and at present, the market for advertisements was not viable enough.

The director-general believed that in future, local governments would ask for their own radio stations.

He said they would need one like the state to inform the electorate of their functions.

CSO: 5500/29

BRIEFS

RADIO, TV FOR KANO--Two more broadcasting services are now available for public in Kano. The first is the Federal Radio Corporation (FRCN--2) Kano which had since began test transmission on the medium wave band. The second one is "City Television" station owned by the Kano State Government and now transmitting from Government House, Kano where it was temporarily located. The television station broadcast in colour on Channel 67 in the ultra-high frequency (UHF) range and covers mainly the state capital and its environs. The two new services bring to five the number of broadcasting stations in the state capital. The others are--Nigerian Television Authority, Kano, the Kano State Broadcasting Corporation and a sub-station of Nigerian Television Authority, Kaduna. [Article by Abdulhamid Babatunde] [Text] [Kaduna NEW NIGERIAN in English 22 Oct 82 p 11]

CSO: 5500/29

BRIEFS

OPTICAL FIBRE PLANT--A R1-million optical fibre cable plant, the first of its kind in South Africa, was opened at ATC, Brits, by the Minister of Posts and Telecommunications, Dr Lapa Munnik, this weekend. The use of optical fibre cables would revolutionise the communications industry in South Africa as it already had overseas, said ATC chairman Lou Wildman. An optical fibre uses a glass core through which light waves are guided instead of the electrical impulses of the standard copper cable. The glass core is usually no thicker than a thread of sewing cotton. One km of eight-fibre cable 10mm in diameter weighs only 100kg, and will carry nearly 8 000 simultaneous telephone calls. Optical fibres have no metal in them and are not disturbed by electrical interference and lightning. Despite their small size, glass fibres, originally developed in Britain in 1970, can be made almost as strong as steel, and can support weights of nearly 1 kg on a single fibre. They cannot, however, be stretched much without breaking, and consequently care must be taken while making them into cables. Strength members are incorporated for protection. An interesting feature of the manufacture of optical fibre is that it is all done in one room, little bigger than a large office. The place is so clean that workers wear cloth overshoes so as not to scuff the highly polished floors. [Text] [Johannesburg SUNDAY TIMES-BUSINESS TIMES in English 24 Oct 82 p 1]

CSO: 5500/25

SECOND BROADCASTING CHANNEL

MB131320 Mbabane THE TIMES OF SWAZILAND in English 12 Nov 82 pp 1, 20

[Article by James Dlamini]

[Text] Swaziland broadcasting service is busily preparing for its second channel--SBS-2--set to begin broadcasting early next year.

Director of SBS, Mr J.B.S. Vilakati, said yesterday the construction of the new station at Sidvokodvo was nearing completion.

Mr Vilakati said SBS-2, which will broadcast in Siswati, will have one big station and no booster stations. SBS-1 has six booster stations.

Mr Vilakati said new equipment from the United States had arrived in Durban and are to be transported to Sidvokodvo to be stored until the building is completed.

SBS's chief engineer, Mr Sydney Black, recently returned from the United States where he tested and purchased equipment for the new station.

The new equipment which has arrived in Durban includes insulators.

"Most of the equipment which will be needed for the station has already been purchased," Mr Vilakati said.

SBS-1 will broadcast in English and will give more time to schools and other educational programmes.

"However, broadcasting in two channels and two languages will not be easy in view of current lack of skilled manpower," Mr Vilakati said. "This will involve an intensive on the job training programme," he said. "Building may be easy, but it may not be so easy to find suitable personnel," he said.

SBS currently covers 90 per cent of the country. However, in some areas, such as Nyamane and Makhosini, SBS broadcasts are not heard very clearly. Mr Vilakati said there is an on-going survey to identify all the areas where SBS broadcasts are not clear with a view to improving the situation.

"In areas where our transmission is not clear, we will install low transmitters," Mr Vilakati said.

SBS-2 will concentrate on Siswati cultural programmes. These will include Siswati music, literature and traditional story telling.

CSO: 5500/35

EEC SEEKS TO IMPROVE TANZANIA-MADAGASCAR COMMUNICATIONS

Dar es Salaam DAILY NEWS in English 26 Oct 82 p 3

[Article by Charles Kizigha]

[Text] THE European Economic Community (EEC) has offered the Directorate of Civil Aviation (DCA) telecommunication equipment worth 13m/- to improve communication between Tanzania and Tananarive Madagasca.

The DCA Director-General, Ndugu Loti Mollel, said in Dar es Salaam yesterday that the equipment included aerials, transmetres and receivers of "HF" frequency.

He said that the equipment would be installed at the Dar es Salaam International airport. Installation of the equipment would require very little civil works, he added.

Ndugu Mollel said that part of the 13m/- would be spent on training at least two people from his directorate of civil aviation.

The director general said that the pledge for the equipment was made about five years ago "The equipment will be installed soon after arrival. We are not sure on when it will arrive," he added.

Ndugu Mollel said that communication between Tanzania and Tananarive was not very good. The expected equipment will improve it, he said.

He added that DCA had already established good communication links with Beira, Lusaka and Nairobi.

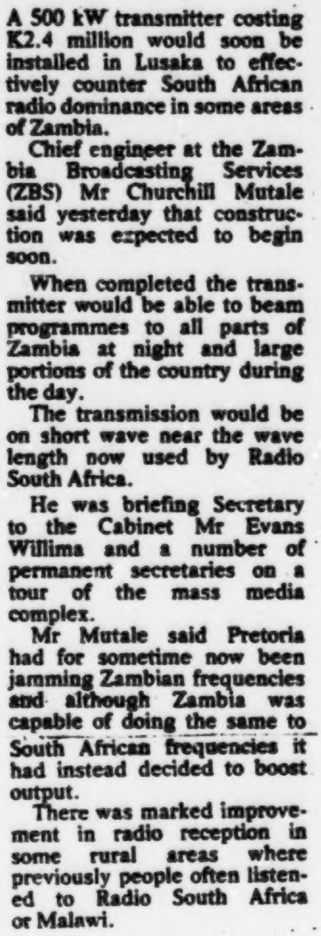
A press statement from delegation of the Commission of the European Communities based in Dar es Salaam said that the 13m/- was part of 100 m/- approved by EEC on October 5, to establish telecommunication network to aid air navigation in the western part of the Indian Ocean.

CSO: 5500/27

TRANSMITTER TO COUNTER SOUTH AFRICAN RADIO DOMINANCE TO BE INSTALLED

Lusaka TIMES OF ZAMBIA in English 5 Nov 82 p 7

[Excerpt]



A 500 kW transmitter costing K2.4 million would soon be installed in Lusaka to effectively counter South African radio dominance in some areas of Zambia.

Chief engineer at the Zambia Broadcasting Services (ZBS) Mr Churchill Mutale said yesterday that construction was expected to begin soon.

When completed the transmitter would be able to beam programmes to all parts of Zambia at night and large portions of the country during the day.

The transmission would be on short wave near the wave length now used by Radio South Africa.

He was briefing Secretary to the Cabinet Mr Evans Willima and a number of permanent secretaries on a tour of the mass media complex.

Mr Mutale said Pretoria had for sometime now been jamming Zambian frequencies and although Zambia was capable of doing the same to South African frequencies it had instead decided to boost output.

There was marked improvement in radio reception in some rural areas where previously people often listened to Radio South Africa or Malawi. . . .

CSO: 5500/39

BRIEFS

TELEPHONE COMMUNICATIONS CUTOFF--Serenje and Kapiri Mposhi have been cut off from telephone communication for nearly two weeks now, senior officials of the Posts and Telecommunications Corporations in Kabwe have confirmed. Worst hit is the police headquarters in Kabwe which has not been able to communicate with Kapiri Mposhi and Serenje. "We have not been in contact with our Serenje and Kapiri Mposhi stations for one week now," Central Province police chief Mr Oscar Phiri said yesterday. But senior PTC techinicians who preferred not to be named said the problem was caused by the change-over from the old system to bring the three Kabwe, Serenje and Kapiri Mposhi in line with other towns. PTC regional manager Mr Allan Shadrow declined to comment. [Text] [Lusaka TIMES OF ZAMBIA in English 5 Nov 82 p 7]

CSO: 5500/39

CABLE TELEVISION TO RECEIVE PUBLIC, PRIVATE FUNDING

Frankfurt/Main FRANKFURTER ALLGEMEINE in German 23 Oct 82 p 13

[Text] Bonn, 22 Oct--Federal Postal Minister Dr Christian Schwarz-Schilling is thinking about a limited freeing of television and other forms of communication from the postal monopoly. He wants to offer private businesses the opportunity to establsih and run the so-called broad-band distribution networks. Such networks can carry far more information than those we have been familiar with up to now. In fact, the postal administration itself intends to move forward more rapidly than hitherto with laying cables for entire cities. The funds for this are supposed to be increased to DM 1 billion in the coming year. But Schwarz-Schilling wants to offer to private enterprise capital projects totaling an additional billion.

What the Federal postal minister has in mind is a cooperative effort between the postal administration and private suppliers. According to this model, the postal administration picks out relatively small municipalities and smaller towns. Then the laying of cables for these communities is offered to private businesses, which in exchange receive a license for a period of 15 to 20 years. The postal administration limits itself to the construction of the necessary main lines and central distribution frames. On the other hand, service to households and laying the grids within the municipalities is left to the private businesses. The postal administration will confine itself in this respect to specifying technical requirements and standards. Then agreements will be reached in private contracts concerning what charges will be made by these businesses to the recipients who have been hooked up.

According to this model, the private network operators then will offer, on 20 to 25 channels, all the usual radio and television programs at first, as well as a broad band of local and other informational broadcasts. Later they can also be granted the right to broadcast programs produced by privately-run radio and television stations--namely, when the legislation on this problem has been provided. According to Schwarz-Schilling's idea, in this way "island networks" are created in one city after another. After the expiration of the license contracts, these island networks then revert back to the postal administration. Schwarz-Schilling expects that as a result of this, in the 1990's an integrated general network will arise. Minister Schwarz-Schilling sees only technical advantages in this program for the time being: "The postal administration will not be giving any more excuses which stand in the way of the dissemination of the new media and programs."

He said that there will be more channels, the benefits from hook-ups will be made more attractive, and along with increasing charges also the amortization of the cable hook-ups will rise as well. "Technical dead ends will no longer exist in the postal administration," said the minister. Since the tests being conducted by the postal administration with glass fiber technology are not supposed to be completed before 1986, Schwarz-Schilling sees no other option than the use of the customary coaxial system in laying these cables. He said that in view of the "astronomically high costs" of glass fiber technology, this is also cheaper.

However, in addition to the technology involved, this broad-band cabling is also important to Schwarz-Schilling as an economic-trend determinant: The hoped-for surge of investments amounting to an annual DM 1 billion will supposedly be of benefit above all to the cable-laying outfits, which have a relatively small-scale organizational structure, the construction trade, and the electrical-engineering trade. But also other branches of industry would feel a distinct stimulation as well. Schwarz-Schilling estimates that if this broad-band cable laying is speeded up more, in excess of 100,000 jobs can in part be secured, and in part be newly created.

As for the rest, the minister wants to administer the telecommunications monopoly of the postal administration in a more liberal fashion than his predecessors did, by letting himself be guided more by the desires of the consumers. However, Schwarz-Schilling wants to wait until later to examine any change in the telecommunications-systems law, as has been demanded by the Monopoly Commission and by some Lands. The minister is also cool toward the demand of the Monopoly Commission that the postal administration keep out of the terminal-device market except for the simple main subscriber station: Only if it should turn out that competition in terminal devices (telecopiers, telephone extensions) is endangered does he intend to contemplate a change in this law.

12114
CSO: 5500/2524

BONN GIVES GO-AHEAD FOR CABLE TELEVISION

Hamburg DER SPIEGEL in German 25 Oct 82, pp 38, 42, 45

[Excerpts] A flood of thirty or more television channels, feature films, and shows free to the home, video services for every situation--Helmut Kohl's government has proclaimed a new age of the mass media for the FRG. New cable systems, which for years had been blocked by the SPD-FDP coalition, are to be made available to private stations and businesses. Federal Minister for Post and Telecommunications Christian Schwarz-Schilling expects that this laying of cables throughout the FRG will be the "greatest job-creating stimulant to the economy." The critics of total television fear cultural trivialization and political manipulation by well-heeled groups.

It has been said often enough that this business will be of national significance, in fact even an affair of the century. For example, when he was still chancellor Helmut Schmidt spoke about "dangers which are more immediate and more perilous even than nuclear power."

"Almost as grand as Gorleben" was the almost awestruck assessment of this by Christian Democrat Ernst Albrecht, leader of the Land of Lower Saxony, for whom the Gorleben project was just too grand. His party colleague Bernhard Vogel, who governs Rhineland-Palatinate, also saw it as extremely momentous, and he drew his parallel with the "expansion of the railroad network in the last century."

Now things are starting to move, and in fact at "full speed ahead," as was announced by Christian Schwarz-Schilling, the postmaster general in Bonn. Having just now taken office, the new Federal Government has proclaimed a new age of the mass media. And as far as the TV tube is concerned, the Germans are to be spared nothing.

In his government policy statement before the Bundestag, Chancellor Kohl "cleared the way" for the "use of modern processes and the development of new technologies, above all in the communications field." As if he were already a wire-puller, the head of the government declared that "the political blockade against the expansion of modern communication technologies" had "ended."

The postal administration, which with 542,000 employees and DM 41.6 billion in annual turnover is the largest employer in the FRG, is expected to carry along with it the telecommunications trade, building industry, and electrical engineering industry into a new economic boom period. About 100,000 new jobs were promised by the minister, sometimes in 3 to 4 years, sometimes even "roughly 2 or 3 years from now." Such signals are being given quite offhandedly by the postmaster.

In fact, and again this is a change in direction, a gigantic market seems to be opening up for West German firms with this cable-laying. Not only new channels would be in store for the 25 million households, but with the corresponding productions there would also be new people, new studios, new technology.

When for the first time everything is connected to a single line, television and videophone, radio and datatext, then many new devices will be needed also in the living rooms. Millions of outdated television sets should be scrapped wherever possible, or at least be modified--a profitable period, although to all appearances this industrial branch is facing such a period with some uncertainty as yet.

If it is going to supply all households and businesses with a cable based on modern futuristic technology, this would cost DM 100 to 180 billion, depending on which estimates are used. Skilled manual workers would have to do the corresponding hook-ups--which comes to about DM 400 per hook-up.

Only: Schwarz-Schilling's economic miracle by no means can happen just yet. The great impetus which the minister is predicting so boldly will occur only 3 years from now at the earliest.

For example, it would seem reasonable to lay the cables at long last for those 11 conurbations which Minister Gscheidle had already intended to give service to. But the "plans for the 11 regions," as Christian Schwarz-Schilling alludes to this dilemma, "are probably already obsolete in technical terms."

Expressed more precisely, at present the postal administration has only copper cable. And if Schwarz-Schilling were to furnish the chosen eleven with this now, he would have to do the same work twice within a few years--"a misconceived capital project on a grand scale," Social Democrat Glotz warns.

Because the future belongs to the glass fiber cable, which is far superior to the customary coaxial cable, but it will not be ready for use until around 1985. Via light beams, this hair-thin glass fiber can transmit incomparably more data, services, and channels than the copper cables. It is the material needed for their data lines by those industries which have located in these conurbation areas; cable television and much else as well can be accommodated in the glass-fiber network on the side, as it were.

Consequently, the new postmaster general can lay out his old cable only where there will be no appearance for a long time yet of the glass fibers--whose dissemination throughout the nation will drag on for decades. In less industrialized zones, for example, in small towns, and in any case in the distant countryside.

But it is there that even after Schmidt's cable blockade the Federal Postal Administration had continued to dig up the ground. Therefore there is no question of any general capital-expenditure stoppage, which is what the SPD-FDP has been accused of by the Union parties. The cable funds, which after all total DM 410 million in the 1983 budget, have not been withheld, but have only been diverted from the cities to the other side of the mountains.

Now Schwarz-Schilling wants to fork out an additional DM 590 million for the purpose of laying copper cable in small municipalities which lie in the reception-shadow areas. And even this program is not new. Hitherto the postal administration had already been accommodating such shadow areas, whenever the communities involved filed a petition and made a contribution of their own resources, or offered cost-saving conditions such as a local installation of the conduit.

Now the Christian Democrat must either draw these millions from the investment reserves surviving from SPD-FDP times, or else borrow them on the capital market.

However, it is still a question whether the capital expenditures of the postal administration and of related branches of West-German industry will turn into a prosperity for the whole. The consumer, who has to pay for tapping off these cables, will save this money in some other area. And the new video technology whose establishment will create jobs at first will also destroy other jobs--this is almost its point.

Nevertheless, all the contradictions and inconsistencies which are peculiar to this ending by the Union-party government of the cabling blockade do not cast any doubts on this fact: A new mass-media age is in store for the FRG. The resentment at the "incredible arrogance of the leftist program makers, who think they know what is good for the citizen" (Albrecht) will be permitted to vent itself now.

There is no doubt that Christian Schwarz-Schilling will "place the Federal Postal Administration in the service of his media-policy strategies," as was said by Wilhelm Noebel, SPD member of parliament in Bonn. When the minister presidents want this, he will interconnect the already existing cable islands into widespread networks. And when money and technology allow him to do this, he will crisscross the densely populated regions with glass fiber.

12114
CSO: 5500/2524

BRIEFS

FINLAND JOINS EUTELSAT--On 28 September Finland signed an agreement to join the Eutelsat organization, which has as its purpose the operation of a general international computer data traffic service by satellite throughout Europe. Eutelsat is a permanent organization which will continue that activity previously carried on by an earlier, temporary organization. Eutelsat can send up satellites or related equipment to serve the international and national computer data traffic. It will not operate in the area of military traffic. Finland at this stage did not sign any agreement regarding the business aspects of Eutelsat. However, the Postal and Telecommunications Agency has already planned funds for the country's share of operational costs, which are estimated to be about 2 million markkas in 1983. [Text] [Stockholm DAGENS NYHETER in Swedish 2 Oct 82 p 13]

CSO: 5500/2538

THOMSON EYES 30 PERCENT OF DOMESTIC TELECOPIER MARKET

Paris ZERO UN INFORMATIQUE HEBDO in French 27 Sep 82 p 60

[Article: "Thomson's Thomfax 2000"]

[Excerpts] "Our objective is to capture quickly 30 percent of the French telecopier market," said Michel Duquenne, manager of Thomson's Facsimile Department, with reference to the company's French marketing plan for its line of telecopiers, particularly its Thomfax 2000, which was given its marketing kickoff at the SICOB [Exposition of Office and Business Supply Industries and Office Organization].

"A key element in our strategy, facsimile is a significant example of the way in which the company intends, as a result of a selectively determined choice, to concentrate its efforts on several key products essential to the use of business communications and data systems," added Francois Dufaux, assistant manager of the Data Processing and Communications Group.

In a novel strategy, whereby the Thomfax 2000 entered the international market before seeking out the domestic market, this telecopier was introduced for the first time by the 3M Company at the ICA [International Communications Association] Show in New Orleans. Some 1,200 Thomfax 2000's were delivered to American clientele in June 1982. Francois Dufaux expects this total to reach 3,500 by the end of the year.

This telecopier has some winning cards: The product occupies a unique niche in the world market for small individual telecopiers; and, derived as it is from the TGD ["telecopieur de grande diffusion": high-volume telecopier] project, it features compatibility almost worldwide and particularly on the American market, where it is compatible with all Group 2 and Group 3 equipment distributed in the United States.

Manufactured in France at Laval, in Mayenne, at the rate of 1,000 units per month, the Thomfax 2000 is expected to attain a production rate of 3,000 machines per month in 1983.

Thomson In Figures

Groupe Thomson:

--Consolidated turnover (before taxes) for the year 1981: 43.6 billion francs, of which 46 percent was sales on foreign markets.

--Ten-year volume growth rate: +2.6.

--Payroll: 130,000 employees.

Thomson-CSF:

--Consolidated turnover (before taxes) in 1981: 25.1 billion francs, of which 48 percent was earned outside of France.

--Expenditures on research and development: 4 billion francs.

--Payroll: 82,000 persons, of whom 8,800 are outside of France.

9238
CSO: 5500/2513

VELIZY PROJECT CAUSES QUESTIONS ON DGT ROLE IN TELEMATICS

Paris ZERO UN INFORMATIQUE HEBDO in French 18 Oct 82 p 37

[Article by Eric Sorlet: "Post-Velizy Hopes and Uncertainties"]

[Text] The Teletel-3V experiment is coming to an end. What will be the future of telematics after this operation, which in principle was limited in time and space? This was the topic of a session at the Data Processing Convention, chaired by Maurice Ronai, task leader at Midist. None of the participants played the fortune teller.

The purpose was rather to learn from experience in order to define guidelines and indications for progress.

The first subject of discussion was the role played by the government, and more particularly by DGT (General Telecommunications Directorate). Antoine Lefebure, in charge of new technologies at Havas, believes that telematics is quite different from the telephone, and that the administration cannot ignore message content. Indeed, content influences distribution and the role of PTT can be compared to that of NMPP (Nouvelle Presse de la Messagerie Parisienne) for the press.

Claude Grezes, responsible for marketing at Teletel (DGT), disclaims the exercise of such a control. In turn, Eric Cherki, in charge of research at CNRS (National Center for Scientific Research), feels that DGT is already busy with many aspects of new media, and that within a liberal economy, it must divest itself to the maximum possible extent, of the distribution of peripherals and management of services.

Concerted Voluntary Compliance

In reviewing the stages of the "telematics plan" and of its reception by the public, Eric Cherki believes that many problems result from the fact that Velizy was first conceived as a general use plan (with the electronic phone directory).

This voluntary compliance strategy, coupled with a lack of coordination with partners, did become an industrial success but also resulted in a socio-political dead end. The change in government has now led to a form of concerted voluntary compliance, but the problem remains the same: where does DGT's power stop?

A Positive Balance

Claude Grezes then established a first balance sheet for Teletel-3V.

In technical terms, everything is working properly, and Teletel is probably the first large heterogeneous operational network. The industrial objectives have been achieved. New activities have been started, with the consequent creation of about 500 jobs. The offer of services has grown consistently in the most diverse areas, shedding more light on problems of design, formulation, and promotion of videotex programs.

The utilization of these services is characterized by a remarkable stability of calls. The 2241 terminals installed in private homes are used an average of eight times per month, each one in order to consult 3.5 services per call. At the same time, 25 percent of the terminals are inactive.

The seven terminals installed in public areas generate 700 to 1000 calls per week. Each of the 46 terminals installed in schools create about five calls per day.

The most consulted services are those of the press, as well as message services (with 200 groups of users), utilities, and education programs.

Adapting to the Public

For 95 percent of the users, the Teletel communications bill is less than 50 FF per month. The introduction of fee services does not appear to be an obstacle to consultation (but it remains to be seen if the amounts charged will be representative of the real costs!).

On balance, the experiment is thus positive, and reveals the demands of users in terms of quality, reliability, as well as hardware and software ergonomics.

It is now time to provide services. But in what context? Based on systematic polls and surveys, B. Cathalat, research director at CCA (research center of the Havas group), reported the analysis of the potential expectations of users, and the principles which can help improve the proposed services.

An often overlooked fact is that telematics implies a change in the attitude of the public, or rather of "the publics." Telematics was introduced in the absence of all "ethics." Yet, technologic innovation must increasingly be socially justified.

Today, the public does not have a clear perception of telematics. There is no rejection, but there is also no great enthusiasm. In this climate of sociologic slackness, several orientations should be respected: lend a meaning to telematics (what use is it? what are its objectives?); vulgarize the technology, the equipment, and the utilization; facilitate acquisition; abandon a monolithic telematics so as to become adapted to a variety of needs and lifestyles.

11,023
CSO: 5500/2528

LILLE FIBER OPTICS PROGRAM BEGINS TESTING

Paris LES ECHOS in French 20 Oct 82 p 12

[Article by Gerard Braz]

[Text] (From our correspondent) The fiber optics communications network of the Lille urban community, whose design is a world first, is entering its test phase. At the beginning of 1983, 50 sets will be connected in the Saint-Sauveur neighborhood of Lille, awaiting the expansion of the operation to 3000-5000 homes in 1984, and by 1990 to 300,000 locations in the CUDL territory (86 communities, 1,150,000 inhabitants).

The originality of the system rests in fiber optics, which makes it possible to bring 32 channels to each of the 50 experimental sets (16 for French and foreign national stations, four for FM radios, and the other 12 for specific programs of regional or local origin, and for video-library services).

But in particular, fiber optics introduce interactivity: users select a program, request and obtain it immediately, without the waiting period often required for the customers of the large American or Canadian copper coaxial cable networks, which become congested in the same way as telephone circuits.

The technology is being tested, and the economic-legal framework is being studied. By the end of October, the 50-set Lille pilot test will become part of an agreement joining the urban community, the General Directorate for Telecommunications, TDF (French TV), and manufacturers; among the latter, together with the large companies, which did not hide their interest, should be Velec-Sefat, a Tourcoing electronics specialist.

Programming: a GIE (economic interest group)

For the final phase, Gerard Vignoble, socialist mayor of Wasquehal and "father" of the project, anticipates nothing less than a joint economic company for the maintenance and commercial administration of the network, which could be accessed by an annual subscription expected to be about 400 francs.

Programming would be entrusted to a GIE which would combine potential service units with government and local collectivities.

In any case, the implementation of such a network obviously encounters the "monopoly" pitfall, which is already implicit as soon as the first direct broadcasting satellites begin their operation.

"When decentralization is being instituted in France," states Gerard Vignoble, "it is inconceivable that the construction and management competence for communication networks remain concentrated in the hands of a central authority, no matter who it is."

The economic consequences of the Lille project are large, since its promoters are seeking a high rank for the French industry on the international market, and are hoping to create 15,000 jobs in the near future, according to Gerard Vignoble's estimates.

The National Commission for Television Distribution Through Cable Networks (CODITEC), of the Group of Electronics Industrialists (GIEL), goes even further: in a recent report, it mentions a potential market of 45 billion francs on French territory alone, likely to cause the creation of 30,000 new industrial jobs and 20,000 other jobs in maintenance and management units.

11,023
CSO: 5500/2528

BRIEFS

ALSTHOM SUBSIDIARY IN BRAZIL--CESP (Sao Paulo Power Company) has entrusted a French-Brazilian consortium, that includes CGEE-Alsthom as leader, with the supply of data processing equipment for a central dispatching and three regional dispatching centers for the electricity network of the state of Sao Paulo, which is the largest in Brazil. The total size of the contract is 353 million francs, 134 of which for the French share. The latter is financed in the form of buyer's credit by a bank pool that includes BNP (Banque Nationale de Paris) as leader. Delivery of the equipment, part of which will be manufactured in Brazil, is planned for 1986, for placement in operation in 1987. [Text] [Paris LES ECHOS in French 21 Oct 82 p 8] 11,023

CSO: 5500/2528

SWEDISH EARTH STATION FOR INTERNATIONAL TELECOMMUNICATIONS

Frolunda NORDISK INDUSTRITIDNING in Swedish No 2, 1981 p 5

> [Text] In January 1984, the National Swedish Telecommunication System will open the first totally Swedish earth station for transmitting telephone conversations and TV pictures by satellite. The earth station, which will be built in Agesta, a mile south of Stockholm, is estimated to cost 60 million kronor and will have a capacity of 2000 simultaneous telephone calls. Finland, Norway, and Denmark have already rented space in the station which, according to traffic, will be one of the largest in Europe. It will sever the rest of Europe via a satellite that, next April, will receive its permanent position above the equator on the west coast of Africa.

An architectural firm is right now drawing up plans. All the buildings are being built by the National Swedish Telecommunication System. The System will request bids from contractors for this part of the project, and at the end of the year the bids will be awarded. The same procedure will be used for the radiotechnical part.

The digging will begin in the spring of 1982. Althogher, the station will not need an area greater than 25 acres. The reason for its placement in Agesta is that as interference-free a place as possible was desired, preferably in the vicinity of Kaknas, which is the central point for TV distribution, and Stockholm, which is the centre for international telecommunication.

The new Agesta station will mainly be used for transmitting telephone calls via satellite to and from 19 different countries in Europe, though unfortunately not from the Eastern states which are not part of the project. The traffic exchange between different countries varies considerably depending on special problems. For example, the traffic to and from England will usually travel via sea cable. The largest part of the traffic at the Agesta station will concern France, Italy, and the Benelux countries.

The satellite that is to be used by the Agesta station weighs 580 kilos and will be sent up during spring, 1982, with the European Ariane rocket [part of text missing] Guayana in South America. The satellite will be in a permanent orbit 36,000 kilometers above the point where the equator meets the west coast of Africa. The distance between the satellite and Agesta station will be

39,000 kilometers. The capacity of the satellite will be 12,000 telephone calls and two TV channels. In order that the operation be as dependable as possible, a spare satellite will be able to immediately take over should the regular one malfunction. This satellite will be sent up one year after the first one. The first should be in operation by 1 August 1983. The satellites are a new European design, and the consortium producing them includes the Swedish companies SAAB and L.M. Ericson.

Even if, at the start, the ECS project is not profitable for the National Swedish Telecommunication System, it would still have greatly positive results. Sweden and Swedish industry can benefit from it politically and through increased knowledge. It is also an advantage to have alternate routes to cables and radio links on land. Moreover, communication by satellite is usually a more secure route.

9843
CSO: 5500/2518

END

JPRS 82357

1 December 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 250

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 82357

1 December 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 250

CONTENTS

WORLDWIDE AFFAIRS

ITALY

Overview of UNESCO's New World Information Order (Luca Balestrieri; POLITICA INTERNAZIONALE, Jul-Aug 82) 1

ASIA

AUSTRALIA

Contract Awarded for Two Satellite Ground Stations (THE AUSTRALIAN, 7 Oct 82) 15

Government Warns TELECOM It May Lose Some of Its Monopoly (THE AUSTRALIAN, 11 Oct 82) 16

Overseas Computer-Controlled Telex Exchanges Planned (Don Maddocks; THE AGE, 12 Oct 82) 17

Briefs
- Austpac Launch 18
- TELECOM Improvement Costs 18

INDIA

Inadequate Planning Delays Use of Satellite Facilities (BUSINESS TIMES, 1 Oct 82) 19

Briefs
ITU Panel Membership 20
Palghat ITI Unit 20
Television Building Plans 20
Electronics Purchases From France 20
Malda Earth Station 21
Durgapur Relay Station 21

INDONESIA

Briefs
Irian Jaya TV Station 22

NEW ZEALAND

Three-Year Remote Sensing Mapping Project Completed (THE PRESS, 26 Oct 82)................................ 23

PEOPLE'S REPUBLIC OF CHINA

Briefs
Urumqi Satellite Station Completed 24

LATIN AMERICA

BOLIVIA

Old Stored Equipment Used To Install Telephone Lines (PRESENCIA, 9 Oct 82).................................. 25

Briefs
Telecommunications Rural Project 26

NICARAGUA

'Radio Sandino' Director on Broadcasting Role (Radio Sandino, 10 Nov 82)............................. 27

SUB-SAHARAN AFRICA

IVORY COAST

Briefs
Foreign News Agencies Scored 29

MOZAMBIQUE

Portuguese Cooperation in Improved Phone Service
(Narciso Castanheira; DIARIO DE MOCAMBIQUE, 30 Sep 82).... 30

Briefs

Chicualcuala, Massinga Tropospheric Stations 31

NAMIBIA

Briefs

Beltel Videotext System 32

SENEGAL

Atlantis Project Put Into Service
(LE SOLEIL, 22 Oct 82)................................... 33

SOUTH AFRICA

Country To Begin Exporting Computers
(SUNDAY TIMES-BUSINESS TIMES, 31 Oct 82).................. 35

SWAZILAND

Telecommunications Satellite Station Building Begins
(Jabu Matsebula; THE SWAZI OBSERVER, 21 Oct 82)........... 36

WEST EUROPE

INTERNATIONAL AFFAIRS

Denmark Developing Computer Data Link System for EC, U.S.
(Erik Bendt Rasmussen; BERLINGSKE TIDENDE, 14 Oct 82)..... 38

DENMARK

Phone Network Soon To Undergo Digital Revolution
(Sv. Aa. Jensen; BERLINGSKE TIDENDE, 2 Nov 82)............ 41

Computer-Controlled Telephone Expected To Be Marketed Soon
(Ejvind Olesen; BERLINGSKE TIDENDE, 15 Oct 82)............ 43

DENMARK/GREENLAND

Briefs

Fifteen Towns Now Receive Television 45

FRANCE

SAT, CIT-Alcatel, Thomson Win Contracts in Africa
(D. Levy; ELECTRONIQUE ACTUALITES, 22 Oct 82)............ 46

FINLAND

Briefs

Finland Joins Euronet 50

OVERVIEW OF UNESCO'S NEW WORLD INFORMATION ORDER

Florence POLITICA INTERNAZIONALE in Italian Jul-Aug 82 pp 144-153

[Article by Luca Balestrieri: "The Conditioning of the Big Western Agencies and UNESCO's Activities"]

> [Text] Among the three areas which the world's information system can be divided into--the area of the OECD countries, the area of countries with planned economies, and the area of the Third World--there was a clear lack of balance to the disadvantage of the South until a few years ago. Efforts to modify power relationships. The structure of information. The role of the large Western agencies. The relationship between the monopoly of information and the technological revolution. Action by the international community, in particular by UNESCO. The South's attempts to overcome their dependent position, in the belief that there is a close connection between information and development. The South also has the problem of defending the cultural identity of its countries.

There is a profound lack of balance, to the disadvantage of the developing countries, in the flow of information between the areas of the world. The production and circulation of information is in the hands of the industrialized North. The perception of this lack of balance led, in the 1970's, to the developing countries' request for a "new international information order." Although it is certainly less dramatic than the food crisis, the energy crisis, or the crisis of the balance of payments, the South's subordinate position in the world with respect to the flow of information has a strategic importance which these countries are aware of.

No economic, political and social (and military) system can be defined in theory (or in practice) without a model for the production and circulation of information. The production, distribution and use of information is a fundamental element in any model of economic and political organization. In the concept of "information systems" we must include both the mass media (newspapers, radio, television), which we can call nonselective, or circular, information distribution systems; and devices for the production and transmission of information aimed at selected targets, mainly persons who make economic and political decisions: these are noncircular communication systems. The diversity of the various systems of production and distribution of information can make us lose sight of the fact that they form a unified sector which is of strategic importance in the existing balance of power among nations. Indeed, the centers of technological innovation are the same, the economic interests involved are interwoven, and there has been a general divergence of interests, in recent years, between North and South in the world.

The technological revolution of the 1980's is rapidly modifying the reality of information systems. Telecommunication devices and the mass media are overlapping, changing, and creating new problems and new challenges for the countries in the South of the world, which are in danger of sinking into an even more subordinate position.

Direction and Volume of Flows

It is perhaps impossible to make an exhaustive quantitative analysis of the composition, volume and direction of the flow of information between the areas of the world. Although some research has been done, mainly by UNESCO, on different sectors, countries and types of information, it is still extremely difficult to obtain a precise and acceptable picture of the quantity and composition of flows of information, both because of the increasing differentiation of the channels and means of transmission of information and because of the proliferation of sources emitting flows of information.

Despite this uncertainty about quantitative evaluations, it is possible to identify three areas, relatively homogeneous internally, which characterize the structure of the flow of information:

1. The area of the OECD countries, where the major structures for the production of information are concentrated; this is the point of departure for currents of technological innovation. In this area, huge financial resources are concentrated in the information sector. The greatest volume of production is here. The major flows of exchange of information take place within this area; and massive one-way flows of information leave it for the information markets of the South of the world;

2. The area of the planned economy countries of the North, characterized by high levels of production and concentration of production structures and resources in the information sector, but having more limited exchanges of information with the world and within the area; this area is behind the OECD with respect to the processes of technological transformation;

3. The area of the South of the world, characterized by a small production of information (concentrated in a few countries, around which regional subsystems are formed), with a fair amount of exchange within the area, little input from the northern planned economy countries, and massive imports of information from the OECD area.

This same structure characteristic of the flow of information can be found in certain sectors about which more research is available, with quantitative data.

Thus we find, for example, three systems for the electronic transmission of information: that of the news agencies, that of the TV news agencies, and the circulation of nonjournalistic television programs (meaning sales, or exchange of programs, not broadcasting).

Until 1975, there was a crushing imbalance in favor of the Western countries in the news agency sector. The decision (Lima, July 1975, meeting of the foreign ministers of the nonaligned countries) to create a news agency pool of nonaligned countries pooled, and therefore multiplied, resources, infrastructures and professional capabilities.[1]

There is no questioning the supremacy of the large agencies of the Western countries, however. Anywhere in the world one can receive at least 600,000 words per day by telex; of these, 250,000 are transmitted by the four big agencies: AP (United States), UPI (United States), REUTERS (Great Britain), and AFP (France); 220,000 are transmitted by the agencies of the socialist countries (mainly TASS and NEW CHINA); 110,000 are transmitted by all the agencies of the Third World taken together. The rest is transmitted by other Western agencies, including ANSA, which covers 77 foreign countries and has a privileged position in the Latin American market.[2] The agencies of the South of the world transmit less than 20 percent of the news which comes over the world network; the four major Western news agencies alone transmit more than 40 percent.

The size of the big Western agencies is translated into qualitative superiority (coverage capacity, speed of transmission); this enables them to control the market.

Behind this superiority is a greater capacity for investment, above all in new technologies; for example, AP's budget was $120 million in 1979. (TASS has a budget of the same order of magnitude, but it is put at a disadvantage by its different concept of professionalism and of professional autonomy.)

The TV news distribution sector is simpler. The dissemination of televised journalistic material is controlled by a few agencies: VISNEWS (Great Britain), UPI-TN (United States), CBS-NEWS (United States), followed at a distance by DPA-ETS (FRG). These four agencies control almost all the flows of this type of televised material; not only the countries of the South, but also those of the Soviet bloc depend on them for world video journalistic information. Regional organizations for the exchange of programs, like URTNA (African National Radio Television Union), do not affect this oligopoly.

The structure of the flows of nonjournalistic television programs is complex. The available data,[3] which have been incorporated in UNESCO's partial research projects, identify the main exporters of programs in the 1970's: (1) the United States, which exported 150,000 program hours per year, almost three-quarters of it within the OECD area; (2) the United Kingdom, which exported 30,000 hours per year, two-thirds of it within the English-speaking OECD area (United States, Australia, New Zealand, Canada) and the rest mainly to the West Indies, to English-speaking parts of Africa, and to the Far East; (3) France, which exported 20,000 hours per year, mainly outside the OECD area (two-thirds to French-speaking parts of Africa, the rest to the Middle East, Haiti, Brazil and Mexico); (4) the FRG, which exported 6,000 hours per year, mainly to other parts of Europe (Austria, Switzerland, Scandinavia, Netherlands, United Kingdom and Italy); outside of Europe the flow is divided so that one-third goes to South America (especially Brazil), one-third to Asia, one-fifth to Africa, and the rest to non-European OECD countries.

As we can see, except for France most exchanges occur within the OECD area. Nevertheless, the quota of programs flowing toward the South--without there being any noticeable flow in the other direction--suffices to dominate the southern markets.

In the South there is local production for export concentrated in a few countries, which supply regional markets (Egypt in the Middle East, Brazil and Mexico in Latin America), but exchanges within the South are greatly inferior to one-way flows from North to South (Mexico, Latin America's main producer, exports only 1,300 program hours; Egypt exports only 1,100).

Italy exports about 4,000 program hours per year--a little less than the USSR--to 42 countries (in 1970). Italian exports go to the United States, Canada, South America, the FRG, France, Belgium, Switzerland, and the Netherlands. The Italian share of the Middle Eastern, African and Australian markets is growing.

We repeat that these figures were arrived at with difficulty, and change every year. Other sectors, like commercial, industrial, and financial information, are almost impossible to quantify. This is serious because it is this type of information that is going through the new information systems. We believe, however, that one can accept--with possible quantitative variations--the abovementioned structure of the flow of information, divided into three areas.

The Technological Revolution

The scenario of the 1980's is dominated by the introduction of new technologies destined to radically transform mass communications and systems for the production and circulation of information. These technological innovations are: the industrial use of optical fibers, the advent of the third generation of microprocessors, the integration of television sets, computers and telephone cables, and direct broadcasting via satellite (DBVS). DBVS, teletext, videotel, the integration and juxtaposition of various information systems, new media and new ways of using the existing ones: in view of the present accelerated tempo (which, what is more important, is likely to continue in the foreseeable future) of the technological revolution in the information sector, one must ask oneself what the overall consequences will be for the world information system.[4]

We can take the following as a hypothetical scenario for the near future: (1) exponential increase in the amount of information available, and increase in the speed of circulation; (2) collapse of the unified cost of information, but large increase in the amount of capital absorbed by the sector; (3) the services of the information and telematic sector will constitute a post-industrial sector of great importance to economic development; (4) the production of information hardware and software technologies will become a propelling industrial sector (with its connections with other strategic industries like the aerospace industry).

Let us also assume that this technological revolution is destined to transform the very structure of the systems of production and circulation of information. One can in fact expect: (1) the formation of microsystems (systems for the production and circulation of information within limited territorial confines or production units, mostly integrated as a function of the production of goods and services); (2) the formation of a global system and regional (transnational) subsystems for the dissemination of information based on multipurpose satellites (with various functions: radio signals, TV, telex, telephone, digital signals for computer communication, etc.).[5]

It is possible that all this will spill over onto the worldwide level, restructuring flows and exchanges of information among nations and regional groups and perhaps aggravating to a critical point the subordination of the southern countries.

The new technologies, which have been invested and implemented in the OECD countries, will probably accentuate a functional center-periphery relationship between North and South, above all because they are technologies which have been produced for the needs of developed economies.

The Interests of the International Community

During the 1970's the southern countries perceived the strategic importance of the information problem and its political nature with respect to the affirmation of substantial national independence; the international community took the matter up, therefore, at various levels in the United Nations system. But the perception of the problem's political aspect has often induced the southern countries to seek a dangerous solution: the subordination of systems of production and circulation of information to the political authorities in charge of the territories where the information circulates, or political responsibility on the part of governments for the information produced under their jurisdiction which circulates abroad. The view of the West has been that if this request were acceded to, it would limit or even kill freedom of the press.[6] The UNESCO discussion was therefore marked by a mutual exchange of accusations between the West and the countries of the South, the latter suspecting the former of wishing to protect their privileged position and the former suspecting the latter of wishing to destroy freedom of the press by legitimizing all kinds of authoritarian regimes.

The conflict became even more heated due to the tactical alliance between the countries of the South and the Soviet bloc, which wanted to turn the question of any interference in its closed and selective information distribution system into a political-diplomatic issue. (Consider, for example, the operation of the diversified system of information transmission by TASS, from the news bulletin for all subscribers, through the various and increasingly reserved editions, up to the red TASS, only a few hundred copies of which are available, and only to the leaders of the regime. This system of control and selective dissemination of information has as its weak point information from outside the system.)

Starting in 1973, the fourth conference of the heads of state and governments of the nonaligned countries, held in Algiers, considered the problem of mass communications as an element of national policies. As an answer to the impasse the discussion had reached at UNESCO, in 1975, in Lima, the foreign ministers of the nonaligned approved the setting up of a news agency pool. Also in 1975, in Helsinki, the Western and neutral countries succeeded in inserting three pages guaranteeing freedom of information into the Final Act. In 1976, in Nairobi, in 1978, in Paris, and in 1980, in Belgrade, the general conferences of UNESCO registered deep splits, until the attempted mediation of a commission chaired by Sean McBride in a report which was presented in Belgrade in 1980 in its final version. But conflicts began to emerge again immediately afterward, in May 1981, when the Director General of UNESCO, the Senegalese M'Bow, again proposed the issuing of a government "license" allowing people to engage in the journalist profession.

In brief, while the southern countries' unilateral initiatives achieved some degree of success (like the news agency pool of the nonaligned, or--in the case of initiatives of individual countries--the information reform in Peru in 1971, or the Algerian rules on the importing of television programs), the initiatives proposed at the United Nations merely gave rise to statements and documents, but nothing in practice. Meanwhile this immobility allows the technological revolution to proceed and the South's subordination to increase more and more.

There is only one sector in which the international community has succeeded in intervening, tackling the problem of the distribution of the elements of information systems which can be identified as nonrenewable goods existing in limited quantities. Radio and television broadcasting frequencies and geostationary orbits are in this category. There was a real danger that the industrialized countries of both East and West might take them over to the detriment of the southern countries. To prevent this, in 1971 the WARC (World Administrative Radio Conference), convened in Geneva by the ITU, divided the broadcasting frequencies by satellite transmission among the states. A second conference (Geneva, February 1977) assigned a share of orbits and a limited number of frequencies to each state.

Investments for Information in the South

In the South of the world, there are no resources to be found on internal markets that would permit the production of information which would be competitive, on the world market and within the developing countries themselves, with the information provided by the North. In the last analysis, the disparity in the flows of information between the various areas of the world depends on the ability to offer a growing body of useful information (i.e. for which there is a demand) at decreasing unified prices and at an increasing rate of dissemination. This implies an increasingly broad mobilization of technical and human resources (professionalism, organization, mastery of technologies) and, above all, of financial resources. It is the lack of adequate financial resources which is the major obstacle to the growth of information systems in the developing countries.

Amounts and sources of financing of information systems vary in different regions of the South. Financing can be obtained on the market or by the state, or via a mixed system. In general, the market provides financing for the mass media by means of expenditures for advertising and financing for telecommunications systems with noncircular dissemination by means of the purchase of services by private or government-owned firms. State financing, on the other hand, subsidizes the mass media either by means of direct contributions, or through indirect facilitations, or by means of fees set by law. Noncircular information systems are supported by direct investments made by the state, or by means of a preferential policy of orders placed by government-owned firms. There are certain regional variations in the South in the means of obtaining investment funds for information.[7] Although the most widespread is a mixed financing system, in Africa there is a prevalence of government financing while in South America the market component is larger (advertising).

In general, in developing countries the market is not strong enough to channel into the information sector a share of the domestic product comparable to that devoted to it in the countries of the North; this difference is even greater if one compares absolute figures rather than percentages of GNP.

In the South there is a widespread weakness of firms producing services, and these are the principal users of noncircular information systems. Even where the tertiary sector is better developed, as in certain Latin American countries, the modern services sector which uses the new telecommunications systems in the North is absent. Even the mass media have trouble finding financing on the market. Even in those southern countries (excluding the OPEC countries with the highest per capita income) where the portion of GNP spent on advertising is the highest (Mexico and Brazil: 0.44 percent), it is less than that spent in the OECD countries (United States 2.03 percent, United Kingdom 1.16 percent, Japan 0.97 percent, FRG 0.75 percent, France 0.73 percent, according to data for the late 1970's. Italy trails with only 0.33 percent). The distance between developing countries and OECD countries is obviously even more significant if we consider absolute figures. At the beginning of the 1970's the percentages of funds spent on advertising in the world were divided among the various regions as follows: United States and Canada, 61 percent; Europe, 24 percent; Asia, 8 percent (including Japan and the newly industrialized countries of the Far East); Latin America, 4 percent; Oceania, 2 percent; Middle East and Africa, 1 percent.

The total amount spent on advertising is constantly growing, and in the last two decades the United States' share has decreased. In 1960, the world total spent on advertising was $18 billion, about $12 billion of which in the United States; in 1970, it was $35 billion, $20 billion in the United States; in 1980, the total was estimated at $110 billion, $55 billion of it in the United States, $10.5 billion in Japan, $7.5 billion in the FRG, $6.14 billion in the United Kingdom, $4.5 billion in France, and $1.1 billion in Italy. In other words these 6 OECD countries absorbed 77 percent of world expenditures on advertising.[8]

If the market does not provide the information sector with sufficient financing, the government must intervene to guarantee a minimum level of investment. Political factors can be added to market weakness. Both forms of financing have negative aspects, and in the developing countries they have implications which differ from those which may exist in countries whose social structure is less lacerated by imbalances.

In any case, this amount of investment is insufficient to create productive structures which are competitive with those of the industrialized countries. We have mentioned the budgets of the big news agencies, which guarantee their technological and commercial supremacy. Another example of this insufficient level of investment is the invasion of television markets in the South by programs from the industrialized countries. At present, the low level of investment causes a wide gap between production budgets in the North and South. In 1975, the cost of producing one television hour was, on the average, $150 in Nigeria. In the same year, the BBC spent an average of $30,000 per hour of fiction broadcasting. But the British product--obviously qualitatively superior, given this level of investment--was more than amortized by internal consumption and sales in the OECD area. In 1975, $60 sufficed in Nigeria to purchase one unit of an average U.S. or British serial. The industrialized countries' product is not only qualitatively superior, it is also competitive on southern markets. But since the southern market is marginal, the product is tailored to the cultural and ideological needs of the public in the industrialized countries, which is the principal market. Thus the South receives culturally foreign products.

The result of this competitiveness of foreign programs is an invasion of southern markets. For example, in 1973-74 in Nigeria, out of 100 hours of television broadcasting, 55 percent were imported; 75 percent were imported in Senegal, and 60 percent in Peru. Even Brazil imported 57 percent of its programs (imports which were not compensated by exports). In comparison, the United States imported 1 percent of its programs, Japan imported 4 percent, France 9 percent, the United Kingdom 12 percent, and Italy 13 percent; at the same time they exported on a large scale.[9] In these circumstances, the southern countries' defense of their cultural identity often takes the form--since it is impossible for them to compete successfully on the market--of "cultural protectionism"; this has happened in Algeria, which has placed a ceiling on imports of foreign television programs, and in India, which has favored one of the mass media--the radio--which is less costly and better adapted to rural realities; it is also, and above all, impervious to imports because of its very nature. The problem of cultural identity is even more complex in multilingual countries. Control of the mass media can be used to safeguard subregional languages and cultures (as it is in India, where All India Radio broadcasts news and programs in 20 languages and 34 dialects of the subcontinent), or it can be oriented toward homogenization, squeezing out languages and cultures of ethnic minorities (Algeria's case is paradoxical: the replacement of French by Arabic as the official language of the administration and the media was accompanied by the repression of Berber linguistic groups).

The situation of Africa south of the Sahara is almost desperate from this standpoint: broken up into 2,000 dialects and languages, it leaves dominance of the mass media up to French and English, which are spoken by not more than 10 percent of Africans. A noteworthy example is the failure of Kenya's attempt, from 1974 to 1979, to replace English with Swahili (the koine of Eastern Africa) as the language of the mass media.[10] This failure limits the use of communications systems in rural areas.

The inadequacy of investment is even more serious when it comes to new technologies. Cut off from the development and production of the new micro- and macrosystems in the information sector, the developing countries are active users of these systems only occasionally (we can recall India's DBVS experiment, the Site program, from August 1975 to August 1976, for broadcasting educational programs to 2,400 isolated villages via a NASA ATS-6 satellite).[11]

This trend may be partially offset by regional cooperation. Thus ASBU (Union of Arab Countries for Radio Broadcasting) and URTNA (African National Radio-Television Union), in their regions, promote the concentration of resources necessary for the use of advanced technologies. But except for the Arab countries, which are certainly not short of resources, these countercurrents cannot change the general picture.

In general, the access of developing countries to noncircular telecommunications systems is hindered by the high cost of users' rates for macrosystems; these rates are not only high on the average, they are graded to the disadvantage of minor or peripheral users. The 21st UNESCO General Conference urged the two key organizations in this sector--INTELSAT and INTERSPUTNIK--to work for a reduction of rates for developing countries. But these strangling rates remain in effect.[12]

Information and Development

The relationship between information and development differs radically in the North and South. While in OECD countries the tertiary production sector (information and telematics) is a key sector for economic development, in the South information systems mainly serve the purpose of contributing to agricultural transformation and basic education (literacy, health education). Their contribution to development is indirect, and is apparent only in the long run, so there is no immediate return on investment. To put it simply, we can say that in the North, the information sector is a leading sector in itself, whereas in the South it is auxiliary to long term transformations in the traditional production sectors.

But information technologies are developed bearing in mind the nature, tempo and modalities of development of the industrialized countries. It is often impossible to apply them to the South without reworking both hardware and software. It is important to stress the fact that the imbalance the South suffers from is not merely a matter of quantitative lack of balance in the exchange of information. The fact that flows of information are under the control of the developed countries leads to a misfit of information systems with respect to the economy and the political and social organization of the countries of the South.

Every operational economic model includes systems for the production and circulation of information: (1) in relation to the mechanisms of the formation of macro- and microeconomic choices; information systems are tailored to the requirements of the structures and integration of decision-making circles; (2) in relation to the need for the dissemination and development of technical and professional knowledge required by a given production apparatus: in this connection information systems complement or replace educational institutions; (3) in relation to the creation of needs: as a means of swaying, restraining or orienting consumption, an instrument for the selection of needs.

Micro- and macrosystems for the collection, processing and circulation of information needed for economic decision-making are usually geared to the needs of firms, which are their most frequent economic unit of application--firms which conform to the OECD countries' model. The transfer of such systems to the South runs up against a different structure, and different rationalization problems, in the centers of economic decision-making.

Above all as regards information macrosystems, problems of cost come into play, i.e. the volume of available financial resources. Let us take, for example, the application of information macrosystems to the primary sector. Satellites for the identification of crops, forestry resources, and mineral resources, and related systems for the discovery, processing and distribution of information, are financed, planned and managed by a few countries--the United States, Canada, the European countries and Japan. The information these systems provide is available, as a service offered on the market, to the multinational corporations of the appropriate sector; these corporations' production policies do not necessarily coincide with the programs of the governments of developing countries. The apparently paradoxical situation exists of information useful to the developing countries being made available not to their governments but to multinational corporations in the agriculture or mining sectors, which are thereby put in a position to plan their interventions in these same southern countries. The cost of this information system is prohibitive, so most governments of southern countries are unable to gain access to the information they need. This affects these countries' ability to make macroeconomic decisions apart from the conditioning of the multinational corporations active in the sector; this is especially true of the smallest and poorest countries.

As for the role of information systems as a complement or substitute for educational institutions which impart a level of knowledge throughout society consonant with the needs of development, there are problems involved in applying systems developed in the industrialized North to the South. The developing countries' main problem is not the applicability of systems for the transmission of information to the areas occupied by the users; DBVS systems, for example, can serve scarcely equipped areas in the Rocky Mountains and the Canadian Northwest, the Congo Basin, and India's desolate rural areas equally well (we have already mentioned the Site project). The real problem is the relationship between the cost of producing and transmitting a unit of information and this unit's economic utility. In other words, it is the problem of the relationship between the amount of investment required and the length of time it takes to see results. Literacy programs, basic health education, and the dissemination of knowledge applicable to agriculture are necessities for the development of the South, especially in the poorest countries; but they require vast, flexible, and costly information systems, and results can only be evaluated in the very long term--many years.

The South is therefore in need of flexible but inexpensive systems which favor the capacity for diversification (from village to village, in extreme cases) and a low production cost and users' cost relative to the complexity of the information transmitted: for example, favoring the radio rather than television for educational purposes. A radio program costs less to produce; it costs less to build a reception network; and a very high number of radio stations can fit into the frequencies occupied by a single television channel.

But the technologies of the North favor the complexity of a unit of information, and allow substantial reductions in cost per unit only in the case of markets with the capacity to absorb an exponentially growing quantity of information. Where this capacity is absent (as it is in developing countries), there is nothing but a growing need for greater investment.

Finally, information systems are tools for orienting consumption, and are therefore of primary importance for all development; we are referring to circular dissemination telecommunications systems. The central place of television in the production of the social image is yet to be studied; this image entails partly the reorganization and partly the creation of needs. If a certain model for development in the southern countries must also take into consideration the structure of consumption, and bring about--at least temporarily--choices between individual and collective consumption, the problem is bound to arise of the influence of the mass media on the propensity to consume as a component of cultural identity.

An example of this can be found in the above-mentioned Peruvian law for the reform of information (1977). According to the report of Meza Cuadra, Peru's minister of transport and communications, who submitted the law, advertising occupied up to 37 percent of television program time. Of 390 hours broadcast weekly, in the years before the reform, 146 were advertising.[13] This advertising was purchased mainly by big U.S. multinational corporations, which transmitted a propensity for private consumption aimed at upper income viewers; the tastes they encouraged were a function of the status symbol and were basically alien to the needs of independent development. Furthermore, advertising is only the most visible part of the stimulation of a certain consumption structure; it is also inherent in telefilms and imported programs from the North shown in developing countries. All this causes a misfit between the consumption structure stimulated by advertising and the requirements of development.

Cultural Identity and Power

The southern countries' subordinate position in the world information system contrasts with the tension for the maintenance (or reconstruction) of their cultural identity. The possibility of having an independent socio-cultural order is hindered by this bombardment by values, ideologies, models, and images from outside. In these circumstances there is a transmission of information among areas of the world in the strictest sense of the mathematical theory of information, namely the transfer of an order from one system to another.

One of the functions of the mass media is to shape cultural and linguistic identity and produce a social image. By production of a social image we mean proposing models and ideologies (like systems of values) for the organization of society, proposing an image of the social space that is interwoven with values and functions. Moreover, another thing is at stake: the legitimization or delegitimization of the political authorities in the collective consciousness--the representation or undermining of the sacred nature of authority through the media.

Thus information systems are factors of stabilization or destabilization of a society's cultural order and government (its legitimization). On this terrain, the attitude of the southern countries is ambiguous, and the motives of the commune front formed in the international organizations are more complex.

The invasion of southern markets by information produced in the North and by the ideologies this information is a vehicle for is a factor of instability for the cultural order of the southern countries. In itself, instability is not negative; one must see if the destabilized system has the capacity to absorb the novelties coming from the outside in its own dynamics or if, on the contrary, the instability carries dependence with it. One should not overestimate the capacity for "semiological guerrilla warfare," or the inclination of subordinate social groups in the southern countries to interpret in an "aberrant" way (aberrant with respect to the sender's intentions) messages produced in accordance with a code and semantic order that are alien to the receiver.[14]

Information coming from outside also has destabilizing effects on the political system, in cases where that system is based on a selective distribution of information, with the authorities having access to more information, and information for the masses being censured or manipulated according to "pedagogical criteria." The free flow of information from outside the system gives the whole population the information which political decision-making can be based on. From this point of view, a history of Latin American information systems during the transition from the populist experience to military regimes would be interesting.

We have two separate sets of problems here: the defense of a country's cultural identity, defined as its capacity to absorb information from outside without falling into a dependent relationship; and the defense of the existing power system and its legitimization in cases where it is based partly on selective access to information.

The ambiguity of certain stances of the southern countries, for example at UNESCO, arises from this dual nature of the problem. Defending oneself from cultural dependence can mean imposing the supremacy of political decisions over the regulation of the flow of information. Also, the defense of cultural identity from flows coming from outside can be used as a pretext for the defense of the existing power order. An example can be found in Zaire's legislation about the press and information in general--highly nationalistic in its motives, substantially repressive.[15] Unless the problem of this ambiguity is solved, the outlook for a different world information order is destined to remain confused.

FOOTNOTES

1. For a summary of the activities of the news agency pool of the non-aligned, see Pero Ivacic (president of the pool's coordinating committee), "The News Agencies Pool of Nonaligned Countries and Mechanisms for Dissemination and Exchange of Information" (report dated 23 October 1981, mimeographed).

2. For an overview of the world's news agencies and for data about the major agencies' daily production, see the monograph edition of L'EDITORE, No 28, year III, April 1980.

3. See Kaarle Nordstreng and Tapio Varss, "La television circule-t-elle a sense unique? Revue et analyse de la circulation des programmes de television dans le monde" [Does television travel in only one direction? Review and analysis of the circulation of television programs in the world], Paris, UNESCO.

4. See OECD, "Conference sur les politiques en matiere d'informatique et de telecommunications," (4-6 February 1975), Paris, OECD.

5. See COMMUNICAZIONI DI MASSA No 1, year II, January/April 1981; also see Glen Robinson editor, "Communications for Tomorrow," New York, Praeger, 1978.

6. The battle continues, and the Western editors have even threatened to persuade their countries to withdraw from UNESCO: see FIEJ BULLETTIN, editorial, June 1981.

7. See Elihu Katz and George Wedell, "Broadcasting in the Third World," Cambridge (Mass.), Harvard University Press, 1977.

8. Source: Starch Inra Hooper.

9. Besides the above-mentioned Katz and Wedell (1977) see W. Sydney Head, editor, "Broadcasting in Africa," Philadelphia, Temple University Press, 1974; and John Lent, editor, "Broadcasting in Asia and in the Pacific," Philadelphia, Temple University Press, 1978.

10. See Peter Mwaura, "Les politiques de la communication au Kenya," Paris UNESCO, 1980.

11. See M. U. Desai, "Les politiques de la communication en Inde," Paris, UNESCO, 1977.

12. See "Contribution de l'Unesco a la creation et au developpement des mecanismes regionaux de diffusion et d'echange de l'information," mimeographed, document drafted for the colloquium on the regional and international mechanisms of the dissemination and exchange of information held in Paris in 1981.

13. See Carlos Ortega and Carlos Romero, "Communication Policies in Peru," Paris, UNESCO, 1977.

14. See Armand Mattelart, "Televisione, commercializzazione, rivoluzione," in COMUNICAZIONI DI MASSA, No 2, year I, May/April 1980.

15. See the text of the "Ordonnance-loi" of 28 October 1970 and the resolutions of Zairian editors in Botombele Ekanga Bokonga, "Les politiques de la communication au Zaire," Paris, UNESCO, 1978.

9855
CSO: 5500/2347

CONTRACT AWARDED FOR TWO SATELLITE GROUND STATIONS

Canberra THE AUSTRALIAN in English 7 Oct 82 p 14

[Text]

THE first contract giving Australian industry a stake in the national communications satellite system has been signed.

The $5 million contract has been awarded by Hughes Communications International to Amalgamated Wireless (A'Asia) Ltd of Sydney.

The Australian company will design and manufacture two ground-station sub-systems concerned with satellite tracking and monitoring.

Hughes Communications International is building three satellites and two ground-control stations for Australia's satellite system due to come into operation in 1985.

In a joint statement yesterday, the Minister for Communications, Mr Brown, and the Minister for Defence Support, Mr Viner, said: "This contract is the first awarded by Hughes against its commitment to involve Australian industry in the satellite project under the Australian Government offsets program.

"The early involvement of local industry in this high-technology field is particularly pleasing, and reflects creditably upon its capabilities."

Under the contract, AWA would design, manufacture and supply two sub-systems for primary tracking and monitoring stations, they said.

One of the systems, a communications monitor developed by AWA, was an advanced product with considerable export potential.

Because of this, there was provision in the contract for further systems to be built by AWA and incorporated in overseas satellite systems supplied by Hughes.

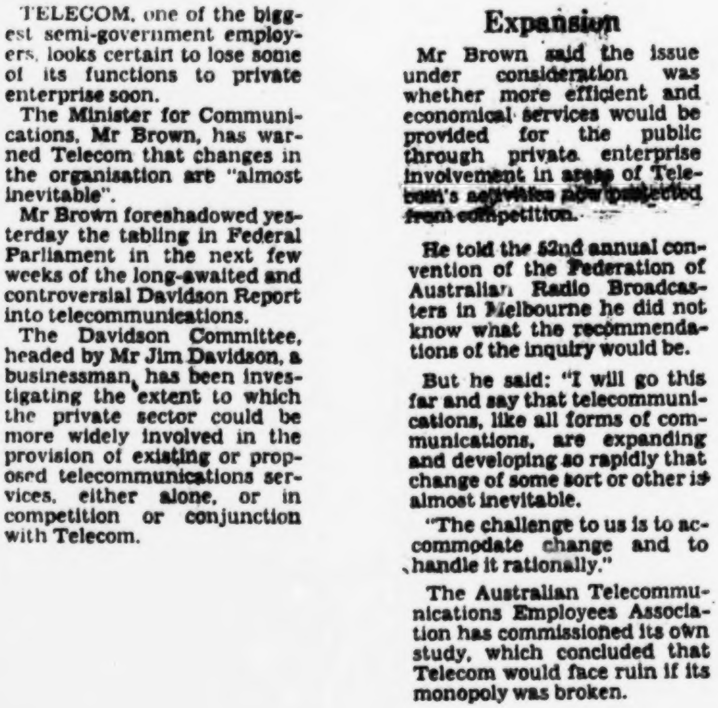
Australian companies.

CSO: 5500/7512

GOVERNMENT WARNS TELECOM IT MAY LOSE SOME OF ITS MONOPOLY

Canberra THE AUSTRALIAN in English 11 Oct 82 p 1

[Text]



TELECOM, one of the biggest semi-government employers, looks certain to lose some of its functions to private enterprise soon.

The Minister for Communications, Mr Brown, has warned Telecom that changes in the organisation are "almost inevitable".

Mr Brown foreshadowed yesterday the tabling in Federal Parliament in the next few weeks of the long-awaited and controversial Davidson Report into telecommunications.

The Davidson Committee, headed by Mr Jim Davidson, a businessman, has been investigating the extent to which the private sector could be more widely involved in the provision of existing or proposed telecommunications services, either alone, or in competition or conjunction with Telecom.

Expansion

Mr Brown said the issue under consideration was whether more efficient and economical services would be provided for the public through private enterprise involvement in areas of Telecom's activities now protected from competition.

He told the 52nd annual convention of the Federation of Australian Radio Broadcasters in Melbourne he did not know what the recommendations of the inquiry would be.

But he said: "I will go this far and say that telecommunications, like all forms of communications, are expanding and developing so rapidly that change of some sort or other is almost inevitable.

"The challenge to us is to accommodate change and to handle it rationally."

The Australian Telecommunications Employees Association has commissioned its own study, which concluded that Telecom would face ruin if its monopoly was broken.

CSO: 5500/7512

OVERSEAS COMPUTER-CONTROLLED TELEX EXCHANGES PLANNED

Melbourne THE AGE in English 12 Oct 82 p 33

[Article by Don Maddocks]

[Text] The Overseas Telecommunications Commission (OTC) is to spend $7 million over the next few years on two new computer-controller telex exchanges.

Announcing the decision, the Minister for Communications, Mr Neil Brown, said usage of the OTC's overseas telex service was growing at a rate of about 20 per cent a year.

"This growth is likely to be sustained in the foreseeable future, even allowing for the introduction and growth of new information transfer services," he said.

The first of the new exchanges, which are being supplied by L M Ericsson, is expected to be in operation by early 1984. Mr Brown said the new exchanges would replace the existing 1800-line and 2500-line exchanges in Sydney.

"The new equipment will keep Australia's telecommunications services in line with the most advanced in the world," the Minister said. "It will enable improvements to be introduced to the overseas telex service and give OTC the capacity to meet increased overseas telex demand until the 1990s."

Mr Brown said the second of the two exchanges would be operational by the middle of 1985.

Each of the new exchanges will have an initial capacity of 4000 lines, and either of the exchanges will be capable of handling Australia's entire overseas telex requirements in an emergency situation.

The new equipment will also have the capacity to automatically "store and forward" telex data, in the event that a receiver's machine is tied up when the information is transmitted.

This capability will help keep telex abreast of its growing competitor in the communications field — electronic mail.

Commenting on that competition, OTC engineer Mr Graham Markey, who has been working on the project, said he thought telex still had a bright future.

He said electronic mail was certainly a "competitor" to telex, but added that with enhancements like "store and forward", telex would be around for a long time to come.

"We're taking the attitude in OTC that there are a lot of people out there using telex. It's got an existing network, and that's one big advantage over the data systems," Mr Markey said.

"We have gone into this contract specifically to buy some enhancements, like 'store and forward'. And at this stage that is an OTC exclusive," he added.

Mr Markey said the OTC was still deciding whether the new enhancement would be offered to all users, or just on a restricted basis initially.

He said OTC would also be going to provide the Ericsson "operator system", which is a back-up sub-system which helps operators handle enquiries.

OTC will also be installing a special "abbreviated address" system, which will allow subscribers to use an abbreviated two-letter code, perhaps, to replace a dialling sequence of up to 15 digits.

CSO: 5500/7512

AUSTRALIA

BRIEFS

AUSTPAC LAUNCH--TELECOM's packat switched data service, Austpac, is on target for public launch in December. At the Austpac User Group's recent meeting, Mr N.R. Crane, Telecom's data division manager, announced that the first customers would be connected to the service by December 30. He said application forms would be available from Telecom's major sales office from November 22 and applications would be accepted in all States from November 29. Mr Crane also announced a special introductory tariff package for Austpac. During the early months customers would not be charged for national traffic carried on Austpac, but normal access charges would apply. For customers with medium to large Austpac data applications, Telecom's data marketing manager, Mr David Gannon, stressed the need to negotiate an agreed development program. This program would enable a customer to develop, field trial and implement his system in an agreed time frame while allowing Telecom to provide network capacity and facilities to meet the program. Facilities and charges for protocol testing were also announced at the user group meeting. From December 15 Telecom would offer a protocol test service using portable equipment which would be available for use within a customer's computer centre. [Text] [Canberra THE AUSTRALIAN in English 12 Oct 82 p 25]

TELECOM IMPROVEMENT COSTS--TELECOM is placing forward orders worth $84 million for local telephone exchange equipment as part of a drive to expand and improve the communications network. The Minister for Communications, Mr Brown, said yesterday he had approved Telecom placing these orders which were for equipment to be delivered in 1983-84. He said: "The orders will be most valuable in helping maintain manufacturing levels in Australia's telecommunications equipment industry." The equipment would be installed in some of about 50 new and extended local telephone exchanges, part of Telecom's $1500 million 1982-83 capital works program. Mr Brown said the firms to be awarded contracts were: Standard Telephones and Cables Pty Ltd of Sydney, $30 million; L.M. ricsson Pty Ltd of Melbourne, $28 million; Pessey Australia Pty Ltd of Sydney, $23 million; Centre Industries, of Sydney, $3 million. [Text] [Canberra THE AUSTRALIAN in English 14 Oct 82 p 3]

CSO: 5500/7512

INADEQUATE PLANNING DELAYS USE OF SATELLITE FACILITIES

Kuala Lumpur BUSINESS TIMES in English 1 Oct 82 p 19

[Excerpts]

THE fate of India's first multi-purpose satellite seems to be well "still in orbit."

After INSAT 1A was launched from Cape Canaveral in the United States early this year, the satellite is yet to become operational. Though its jammed C-band antenna was released by Indian space scientists, its "solar sail" remains stuck. The solar sail is designed to counterbalance the array of solar panels on one side of the satellite and give it stability.

The 1,150-kilogramme INSAT 1A is the first of two identical satellites of the first generation Indian National Satellite System. It is the first multipurpose satellite to be put in geostationary orbit (it remains fixed above a certain area on earth, like India in this case, and remaining above that area even as the earth revolves).

In combines three functions in one. It will route long-distance telephone calls, relay radio and television programmes and keep an eye on the weather all at the same time.

The satellite was built by an American firm, but its design is essentially the brainchild of Indian space scientists. Its triple function capability is based on an internal study by the Department of Science and Technology. The satellite was built according to specifications provided by the Indian Space Research Organisation.

High quality

Hopefully the snags will not have any substantial effect on the usefulness of INSAT. At most, they will reduce the satellite's life, originally set at about seven years, by a few years because of faster depletion of the thruster fuel needed for periodic orbital adjustments. However, a second satellite which was originally to be a spare, INSAT-1B, will be up next year.

At the moment, INSAT is parked in its pre-assigned slot in geostationary orbit, 36,000 kilometres above the equator at 74 degrees east longitude. According to Indian space officials at the Master Control Facility at Hassan, all systems of the satellite are in perfect health.

The satellite's telecommunication and TV transponders have been successfully tested. Its meteorological equipment has already relayed high quality cloud pictures. Unfortunately, there appears to be some delay in setting up the necessary ground facilities for the commissioning of INSAT.

INSAT has 12 transponders for telecommunication needs and two transponders for TV. It also carries a very high resolution radiometer for meteorological observation and a . . . . . meteorological data relay channel. It is a joint venture of the Department of Space, the Posts and Telegraphs Department (P & T), the Indian Meteorological Department, Doordarshan and All India Radio.

The INSAT ground segment comprises 31 earth stations and terminals set up by the P & T Department. Five of the large telecommunications earth stations are located at Delhi, Bombay, Calcutta, Madras and Shillong. There are also 13 medium earth stations, 11 remote area terminals and three transportable emergency terminals.

Meteorological data from INSAT is to be received and processed at the Meteorological Data Utilisation Centre (MDUC) in New Delhi. The India Meteorological Department is setting up a network of over 100 unmanned Data Collection Platforms in remote areas which will send meteorological data to the MDUC via INSAT.

The greatest benefit from INSAT will perhaps be reaped by the P & T Department. The satellite will provide more than 4,000 high grade two-way telephone channels for inter-city traffic. At the moment, trunk traffic between major cities is carried mainly by microwave and underground coaxial cable systems. INSAT provides a third network of high-grade trunk circuits.

A major function of INSAT will be television broadcasting. Technically the satellite is capable of providing television service to the entire country for 12 hours daily. But inadequate planning will initially limit it to 45 minutes of educational programmes and one hour of "development" programmes. This, many feel, would be a colossal waste of resources.

INSAT is equipped with a high-power S-band antenna for television signals which can be picked up by specially designed TV receivers. The advantage of such a facility is that TV service can be provided to any part of the country without a TV transmitter. This, says N.L. Chawla who has been actively involved with the INSAT project, "opens up tremendous possibilities for a country like India."

Initially, INSAT will provide TV service to selected village clusters in six states — Andhra Pradesh, Orissa, Maharashtra, Bihar, Gujarat and Uttar Pradesh. The plan is to install 8,000 direct-reception sets and about 7,000 conventional sets for community viewing in the six states.

The possibilities with INSAT are many. But most will remain unused for a long time because of inadequate planning. — Depthnews Science

CSO: 5500/8501

BRIEFS

ITU PANEL MEMBERSHIP--Nairobi, October 23 (PTI)--India has been re-elected to the administrative council of the International Telecommunications Union (ITU) topping the list of 11 winners from Asia and Australia region in the poll held at the plenary here last night. India polled 111 votes representing the support of more than 80 percent of the member countries. China and Japan followed India with 108 and 105 votes, respectively, while Pakistan managed the last place in the list with 65 votes. Bangladesh was among the five countries from the region voted out by the plenary. [Text] [Bombay THE TIMES OF INDIA in English 24 Oct 82 p 9]

PALGHAT ITI UNIT--New Delhi, Oct 19--The cost of expanding the Palghat unit of the Indian Telephone Industries (ITI) for producing electronic switching equipment with a capacity of 1.5 lakh lines per annum has gone up to Rs 33.72 crores with an exchange component of Rs 15.83 crores at current prices from the estimate of Rs 15.95 crores (foreign exchange component Rs 8 crores) [Excerpt] [Madras THE HINDU in English 20 Oct 82 p 7]

TELEVISION BUILDING PLANS--New Delhi, Oct 19--A full-fledged TV centre with studio facilities and a 10 kW transmitter is expected to come up in Bangalore by 1984-85, the Information and Broadcasting Minister, Mr N.K.P. Salve, said in the Lok Sabha today. The equipment had been ordered, the site acquired and building plans finalised, he told Mr S.N. Krishna. In Trivandrum: Mr V.S. Vijayaraghavan was informed that a low-power TV receiver-cum-relay system was being set up at Trivandrum before the Asian Games. The construction of buildings for a TV centre in Trivandrum was in progress and an expenditure of Rs. 173.44 lakhs had been incurred up to September. It was expected to be commissioned by 1984-85. Asiad events: Seperate items of producers, cameramen, commentators had been constituted to cover each of the events in Asia, Mr Salve told another member and denied that there was any confusion in this regard.--UNI & PTI [Text] [Madras THE HINDU in English 20 Oct 82 p 6]

ELECTRONICS PURCHASES FROM FRANCE--New Delhi, Oct 19--Mr Yogendra Makwana, Minister of State for Communications, today denied in the Lok Sabha that the French offer for setting up a digital electronic equipment factory at Gonda in UP was accepted without floating a global tender. The tenders were invited and evaluated before the French offer, which was examined and found reasonable, was accepted, he said in reply to a question by Mr K.K. Goyal. Mr Makwana said global tenders were also invited for the expansion of the Palghat unit of the Indian Telephone Industries. The tenders were high in view of the financial constraints. A rebidding was done. Meanwhile, the offer from France with the backing of the French government was made. This was under examination and no decision had still been taken. Mr Vijay N. Patil, Deputy Minister of Communications, said the Government had decided to set up two large factories for the manufacture of digital electronic switching equipment with an annual production capacity of five lakh lines each. One of the proposed factories would be set up under Indian Telephone Industries of Gonda. The Government had also decided to augment the present manufacturing capacity of the Palghat unit of ITI from 10,000 lines per annum of small electronic exchanges to 1.5 lakh equivalent lines per annum by including the manufacture of electronic trunk automatic exchanges, rural automatic exchanges and private automatic branch exchanges. The construction of the proposed large digital electronic switching factory at Gonda was likely to start during 1983-84, Mr Patil said.--PTI [Text] [Madras THE HINDU in English 20 Oct 82 p 7]

MALDA EARTH STATION--Calcutta, October 19--Malda is going to have an earth station to relay television programmes on the Asian games beamed through Intelsat within a range of about 20 miles. Equipment for the station has been despatched from Delhi. This makes Malda the only district town in West Bengal to get an opportunity to watch the Asian games on TV throughout the day. [Text] [Bombay THE TIMES OF INDIA in English 20 Oct 82 p 7]

DURGAPUR RELAY STATION--Durgapur, Oct 30--As things stand, there is no possibility for TV set owners in Durgapur, Asansol and Dhanbad to see the Asian Games because of the inordinate delay in setting up the TV relay station at Asansol. Signals from the Calcutta TV station are extremely weak in this industrial complex. The plan to set up the relay station at Asansol was adopted four years ago. According to the present rate of progress, the relay station will not be ready before April. A memorandum has been sent to the Union Information and Broadcasting Ministry to install a booster system at Asansol for the time being to enable TV owners in the above areas to see the Asiad. When it is possible for the Ministry to install a booster at Malda, there is no reason why it cannot be installed at Asansol, the memorandum says. [Text] [Calcutta THE SUNDAY STATESMAN in English 31 Oct 82 p 12]

CSO: 5500/7029

BRIEFS

IRIAN JAYA TV STATION--Nabire, Irian Jaya, 21 Oct (ANTARA/OANA)--Irian Jaya Governor Isaac Hindom, in the name of Information Minister Ali Murtopo, Tuesday inaugurated a television relay station here built at a cost of RP 130 million (about U.S.$1,500,000). With the new installation, TVRI [Republic of Indonesia Television] has now 159 relay stations in different parts of the country. Colonel Samilan, the project officer, said with its 27-meter high antenna, the station for the time being can cover only Nabire and nearby areas. There is a plan to extend the antenna to 40 meters next year. [Excerpt] [BK220553 Jakarta OANA in English 1240 GMT 21 Oct 82]

CSO: 5500/4309

THREE-YEAR REMOTE SENSING MAPPING PROJECT COMPLETED

Christchurch THE PRESS in English 26 Oct 82 p 33

[Text]

An era in the science of remote sensing has been reached in New Zealand on the completion of a three-year Earth Resources Management Project, jointly sponsored by the Government and I.B.M.

This is according to the Minister of Science and Technology, Dr Ian Shearer, who handed over the report to the managing director of I.B.M. New Zealand, Ltd, Mr Basil Logan, in Wellington recently.

The report demonstrated the use of computerised data from satellite and aircraft multispectral scanning cameras for flat land agricultural and oceanographic mapping, assessing land use in hilly unaccessible terrain, and monitoring exotic and indigenous forests in the King Country and Canterbury.

Using I.B.M. computer software and I.B.M.'s Sydney-based facilities, the project established a New Zealand multi-disciplinary remote sensing group with members from the Government departments of Scientific and Industrial Researach, Lands and Survey, Agriculture and Fisheries, and the Forest Service.

The remote sensing section at the D.S.I.R.'s physics and engineering laboratory in Lower Hutt, which was first established in 1974, was the co-ordinating group.

The project was conducted in two phases. Information from the Landsat Two satellite, launched by the United States National Aeronautics and Space Administration in 1975, gave a large regional view from a height of 920km, of the King Country and Canterbury.

An 11 channel multispectral scanner gave a more localised perspective as an aeroplane flew over the same areas.

All information was recorded as numbers on magnetic tapes. These were converted by computer into a colourful display on a visual display unit or a hard copy photograph, each colour having a different meaning for the "informed" user.

For example, the Landsat photographic maps showed green healthy pasture in red, forests in brown, and water sediment as varying shades of blue.

However, this is an oversimplification, according to a D.S.I.R. botanist, Ms Susan Timmins, who said the numbers were processed and analysed according to their reflectance values.

She said the satellite information was recorded in four wavelengths, two in the visible and two in the infrared. Aircraft scanner information was recorded in 11 wavelengths.

"As only three wavelengths can be displayed at any one time, the ones we use depend on what we want to analyse," she said.

Ms Timmins believes remote sensing is a valuable addition to a map maker's tool kit. It is a seventh of the cost of conventional ground surveys.

"We manipulated data from the aircraft scanner to simulate that of future satellites and produced a Darfield map showing barley, wheat, potatoes, peas, dry and green pasture, and bare ground," she said.

"If New Zealand had an earth resources satellite receiving station we could have this sort of information 'on line' and thus be able to supply farmers, foresters, land managers, environmentalists and fisheries people with up-to-date information."

The question of a receiving station had been put to a Government interdepartmental committee which would report to the Minister of Science and Technology soon, and communications aspects had been referred to the Communications Advisory Council, Ms Timmins said.

CSO: 5500/9041

BRIEFS

URUMQI SATELLITE STATION COMPLETED--The Urumqi satellite ground communications station was recently completed and handed over for experimental use. According to investigations by experts and engineers of State Council departments concerned, such as the television (?engineering) department, the equipment fully meets the demands of the design. The Urumqi satellite ground communications station is a permanent ground station in China's first satellite telecommunications network. It will handle telecommunications, radio and television relays and newspaper fascimile transmission. All the equipment was designed and made in China. Work on constructing the station began in 1978. The preparatory construction was completed in October 1979. Installation of equipment began on 27 July last year. The engineers and technicians taking part in the work overcame many difficulties, worked hard with concerted efforts, and completed the installation work 2 weeks ahead of schedule. On the afternoon of 5 November responsible comrades of the regional party and government and the Urumqi PLA units Wang Enmao, Xiao Quanfu, Tan Youlin, Tomur Dawamat, Huang Luobin, and Janabil met in the [word indistinct] guesthouse the representatives who had taken part in acceptance work for the station. Comrade Wang Enmao thanked them on behalf of the people of all nationalities in the region, and wished them new success in science and technology work. [Text] [HK060310 Urumqi Xinjiang Regional Service in Mandarin 1300 GMT 5 Nov 82]

CSO: 5500/4107

OLD STORED EQUIPMENT USED TO INSTALL TELEPHONE LINES

La Paz PRESENCIA in Spanish 9 Oct 82 p 6

[Text] Cochabamba, 7 Oct--The administrative board of the Automatic Telephone Directorate has formally praised general manager Fernando Cabrerizo; technicians Victor Hugo Jaimes, Rolando Lanza and Eduardo Arce; and also Francisco Baldi and other assistants who, according to plan, have completed in the span of 3 months the installation of 1,000 telephone lines in the central hippodrome of this capital city.

In addition, the representative of the private shareholders appeared before the administrative board and Carlos Morales Paz Soldan, vice president of the Automatic Telephone Directorate, to praise the technicians highly for the work they have done and to emphasize the shareholders' ability to pay for completing the project and thus in a short time solve the problem created 4 years ago when subscribers to the tenth series cancelled their contracts.

Insofar as the automatic telephone workers themselves are concerned, they have made known to the full board their endorsement of the work of manager Cabrerizo who had given instructions that all the materials which had been stored for years be utilized and that they install the missing lines. They noted that he had done this at the risk of displeasing managerial employees who were of the opinion that the ground floor should be solely for the installation of new telephone lines. For Cabrerizo's purposes, a large room was then set aside to house the stored equipment.

These measures saved the firm approximately 1,000,000 dollars which the installation of the 1,000 telephone lines otherwise would have cost. The employees did the work in their free time for only 7,000 Bolivian pesos.

Fernando Cabrerizo pointed out that, after installation of the equipment is completed, then the work of making the outside connection to the power distributional centers will start and next the installations for houses. Cabrerizo indicated that he was counting on continuing these other projects in the same way so as to overcome the problems caused 4 years ago by the subscribers who had inexplicably liquidated all their shares of stocks. But he said this was not affecting the installation work in spite of the fact that all of the stored materials had deteriorated.

A representative from the auditor's office also has released his report on Cabrerizo's work, stating that the results achieved have been very good.

9972
CSO: 5500/2008

BRIEFS

TELECOMMUNICATIONS RURAL PROJECT--Authorities of the Rural Telecommunications Administration have reported that they are awaiting a shipment of modern equipment from La Paz to connect the town of Mina Bolivar to the national rural telecommunications network. Authorities and campesino leaders of this town located approximately 180 kilometers from Cochabamba along the border with Oruro Department protested the lack of cooperation by authorities of the Directorate General of Rural Telecommunications to see that they have dependable communications services. Authorities in Mina Bolivar stated that at present they do not have any means of communications since not evan a highway exists to link their town with Tacopaya. They noted that the Directorate General of Telecommuniations, through its representative Benjamin Fernandez, had promised to install this service several months ago, but that absolutely no work has been done to date. Benjamin Fernandez, the district director of rural telecommunications, noted that the installation of a modern system of communications between Mina Bolivar and Cochabamba and with the rest of the interior had not yet been carried out for economic reasons. He said that they are now only awaiting the shipment of radio equipment from La Paz to install this rural telecommunications service. [Text] [Cochabamba LOS TIEMPOS in Spanish 12 Oct 82 p 6] 9972

9972
CSO: 5520/2008

'RADIO SANDINO' DIRECTOR ON BROADCASTING ROLE

PA112055 Managua Radio Sandino in Spanish 1830 GMT 10 Nov 82

[Text] Miguel Blandon, known as Chuno, director of Radio Sandino and Nicaragua's representative at the ninth meeting of the Nonaligned Movement's Radio Broadcasting Organizations, which is taking place in Havana, Cuba--has pointed out the importance of broadcasting in Nicaragua under the threat of imperialism's ideological campaigns.

Blandon said that Nicaragua is interested in any kind of cooperation that the nonaligned countries may give our country in the broadcasting sphere, which he characterized as having fundamental value because of the social and cultural characteristics of Nicaragua.

PRENSA LATINA's (Walfredo Angulo) interviewed Miguel Blandon:

[Begin recording] [(Angulo)] We are at Havana's conventions center, where we will interview Miguel Jesus Blandon, who is Nicaragua's delegate to the ninth meeting of the Nonaligned Movement's Radio Broadcasting Organizations, meeting here in Havana.

Blandon, we would like to know the main subjects that Nicaragua is bringing to this meeting.

[Blandon] One of the most important subjects, as we see it, is the use of radio broadcasting as a means of aggression against our countries. Nicaragua, being a weak country, does not have much technology and therefore cannot defend itself in the broadcasting field, and it is the victim of flagrant attacks from the United States, a very rich world power that can afford the luxury of installing transmitters in neighboring countries along our border in order to penetrate and try to influence the most backward sectors of the population.

Therefore, this is, for us, one important and hot issue, because it is very much linked with the military attacks that we are suffering, especially from the northern border. As we all know, these attacks are always linked with counterrevolutionary radio broadcasts that prepare the conditions so that these people may operate more easily.

This is why we say that the topic of radio broadcasting, as a factor of imperialist aggression against our countries, is a key subject and very important to us.

[Question] Blandon, what other subject do you find of interest in this meeting?

[Answer] We see whatever the nonaligned movement can do to promote broadcasting cooperation as an important subject. Radio broadcasting is the primary communications means because it can reach masses throughout the territory.

As you know, the literacy campaign recently fought the problem of illiteracy that Somozism left us. This is why radio broadcasting is a factor of great importance in our country. It is a means of communicating the ideas of the revolution to all Nicaraguans. Therefore, whatever the nonaligned countries can do to cooperate with us in the development of broadcasting is of much interest to us and very important for the development of our process.

[Question] We thank Miguel Jesus Blandon, who is director of Radio Sandino, in Nicaragua, for his statement to PRENSA LATINA's radio service.

CSO: 5500/2017

BRIEFS

FOREIGN NEWS AGENCIES SCORED--The minister of legal and parliamentary affairs, Comrade Zvobgo, today announced that his ministry is working on a program of constitutional changes, which he hopes will be completed in 3 years. Some of the proposed changes include having an executive president as well as having one house of Parliament, instead of the present two. Comrade Zvobgo said that any envisaged changes will come about at the end of the life of the present Parliament. Comrade Zvobgo, who was speaking to the ZBC after his return from a holiday abroad, also referred to what he termed lies being spread by enemies of Zimbabwe abroad. He said foreign news organizations are painting a bad picture of the country, but noted that Zimbabwe's information attaches have been able to correct this image. [Text] [CA161126 Harare Domestic Service in English 1600 GMT 15 Nov 82]

CSO: 5500/38

PORTUGUESE COOPERATION IN IMPROVED PHONE SERVICE

Beira DIARIO DE MOCAMBIQUE in Portuguese 30 Sep 82 1,3

[Article by Narciso Castanheira]

[Excerpt] CENTREL, an Automatic Electrica Portuguesa company, is in the process of installing new equipment for 600 more subscribers in the Beira Telephone Exchange. According to Eduardo Martins, who is in charge of the undertaking for the Center and North zone, the work which will be completed within 2 months, will make it possible to establish telephone connections by December for the 600 subscribers.

Meanwhile, the same company has already very recently installed new equipment in Maputo for 1,200 subscribers in the Alto-Mae telephone exchange, and an additional 2,400 in the Baixa Automatic Telephone Exchange.

On the other hand, in view of their present poor condition, CENTREL technicians have already undertaken a study of the country's telephone exchanges to determine all the material needed for their repair.

Questioned about the company's other activities, Eduardo Martins said that several projects are being carried out both in the South and in the Center and North of the country. One of its outstanding works is the installation of the first double-wire electronic exchange in the North zone for the TEXMOQUE factory in Nampula.

In Sofala, CENTREL, which has been operating under this name in our country for about 2 years, has been responsible for 37 restoration projects, that is, the installation and maintenance of automatic telephone exchanges.

One of the problems it has encountered is the lack of equipment for establishing branches in Quelimane and Nampula, to help the country's North provinces.

8870

CSO: 5500/18

BRIEFS

CHICUALCUALA, MASSINGA TROPOSPHERIC STATIONS--Four years after having been the target of enemy action which destroyed the telephone exchange, three generating groups, which previously functioned in the Chicualacuala tropospheric station in Gaza Province, have been restored. The equipment is functioning perfectly at the Massings a tropospheric station in Inhambane Province, where it was first tested by the technical engineer Iglesias, who for several years has been working in the electrical sector. According to data received there, by restoring this material, they have saved about 10,000 contos in foreign exchange, which would have been necessary to import new equipment. With three generators, the Massinga tropospheric station, also known as a repeater station, has begun to function as a transmission signal which enables it to establish better communications between Maputo-Beira Tete-Quelimane. "For the best possible use of communications, it finally remains only to obtain more spare parts for the transmitters, a project introduced into Mozambique Telecommunication plans for the coming year," said Alfeu Matola, radio communications technician, who for about 8 years has been working in the sector. He is in charge of that station. [Text][Beira DIARIO DE MOCAMBIQUE in Portuguese 27 Sep 82 p 14] 8870

NAMIBIA

BRIEFS

BELTEL VIDEOTEXT SYSTEM--THE SWA Post Office has taken a massive step towards offering better service to the public when they introduced the so-called Beltel system yesterday. With an ordinary telephone and the standard TV set found in almost every home, only a small relatively cheap terminal can be bought and at a moderate fee the prescriber can tune call up various kinds of information on his TV screen. With this piece of technology one can get almost instant information on the gold price, the weather forecast, hotel and flight bookings and even one's horoscope. The computer is in Pretoria and by merely dialing the Pretoria number one can get all the information necessary on the TV screen. This way of communication has been implemented in West Germany, Britain, France and various other countries. At the moment the cheapest terminal costs around R600 according to Mr A Rooke, the Post Office engineer in charge of the project. But with mass production this can drop to R250 or R300 in time. Mr. Rooke said the unoccupied time on TV could be used for this purpose by those who had the terminal and needed the information. [Text] [Windhoek THE WINDHOEK ADVERTISER in English 28 Oct 82 p 2]

CSO: 5500/26

ATLANTIS PROJECT PUT INTO SERVICE

Dakar LE SOLEIL in French 22 Oct 82 p 3

[Article by D.D.: "Atlantis Inaugurated: Europe-Africa-South America Telephone Connection"]

[Excerpts] Dakar, Brasilia and Lisbon connected simultaneously by telephone; this was the event long awaited by the three capitals since the intention agreement was signed in Rome in September 1978 by Brazil, the Ivory Coast, Italy, France, Portugal and Senegal, providing for development of the Atlantis project, which was inaugurated and put into service yesterday afternoon. At 1500 a telephone conversation took place between the three countries' ministers of Telecommunications. It had been preceded some moments earlier in the morning by one between President Abdou Diouf and President Eanes of Portugal.

According to Alassane Dialy Ndiaye, the president and general manager of TELE-SENEGAL [expansion unknown], this 21 October is a great day for international telecommunications. "This is in fact the first time in the history of the world that an underwater telephone cable has been inaugurated which connects three continents, South America, Africa and Europe."

In his speech he listed the characteristics of the Atlantis system, which consists of two sections: Recife (Brazil)-Dakar, 3,427 km, and Dakar-Burgar (Portugal), 2,919 km. The capacity of the two sections is 1,320 and 2,580 4-kilohertz telephone circuits. The total cost is known to be 54 billion CFA francs, divided between the 10 countries initiating the plan. Senegal's share of the financing is 2.5 billion.

Measures have been taken for the maintenance of Atlantis, since an underwater cable is not protected from the effects of a natural cataclysm or normal use. This was done with the agreement of all partners. Today, therefore, our country "ranks high among countries of the continent possessing an advanced international telecommunications network."

Posts and Telecommunications Minister Kouassi Apete of the Ivory Coast pointed out in his speech that completion of the project sets an example of cooperation between Third World countries and industrialized nations on the one hand, and between countries of the south on the other hand. This shows, in his opinion, that "cooperation is not just an empty word. And we are certain that the arrangements that prevailed throughout the negotiations and during development of the project will be extended to other contexts." He also expressed his belief that cooperation between South and South has not been exploited as it should have been, and that it offers tremendous possibilities.

The underwater cable, the Ivorian minister went on to say, is a complement to the optimal use of communications satellites. It offers a diversity of methods of conveying information between the African, European and American continents. It also enables Africa to open itself up to other parts of the world. For his part, Djibo Ka, our minister of Information and Telecommunications, said that in international relations today, telecommunications are "a factor of stability and peace, thanks to the communication they make possible between nations, with mutual understanding as the goal."

There is no doubt about the economic importance of such communications. On that subject, quoting a celebrated speaker from the World Bank, Djibo Ka emphasized that they are "the nervous system of both the economy and society." For this reason, Senegal has developed various projects to strengthen its network: from the Gandoul Atlantis station (1972) to the underwater cables between Morocco and Senegal to the first section of the PANAFTEL [expansion unknown], etc.

Because of such projects our international telecommunications traffic has increased from 800,000 telephone minutes in 1972 to 13 million 1981; from 1 million telex minutes in 1972 to 3.5 million minutes in 1981; and from 5.9 million words in 1972 to 10 million words in 1981 [as published]. The Atlantis cable will be capable of contributing to the establishment of a "new order of information and communication based on more democracy and equilibrium and on the gradual elimination of every form of tendentious distortion of information." The inauguration of the cable ended with a visit to the Medina power plant.

8946
CSO: 5500/34

COUNTRY TO BEGIN EXPORTING COMPUTERS

Johannesburg SUNDAY TIMES-BUSINESS TIMES in English 31 Oct 82 p 7

[Text]

SOUTH Africa is about to export computers.

The package will include locally developed software for the multi-billion-dollar comfirming houses sector overseas.

The unprecedented move to sell South African computers comes after collaboration between two Reef-based companies, Maule Computer Systems and Punch Line, which have assessed the vast potential in penetrating the international shipping and airfreight business.

"Confirming houses handle virtually all international trade with methods that haven't changed much since the days of sailing ships. They are grossly behind most other business sectors," says Punch Line managing director Barry Schechter.

Maule Computer Systems managing director Alex Payne says: "We're looking at sales round the world.

"Every country doing international trade has confirming houses, and as far as we can tell there is no other computer system dedicated to their highly specialised work."

Mr Schechter, a chartered accountant who spent 18 months in shipping before starting his computer bureau and software import business in Johannesburg, says he discovered several confirming houses which could not guess within R500 000 what they were owed without spending days on masses of paperwork.

With Maule's Saturn and Tornado computers and Punch Line's new software, Mr Schechter claims that any confirming house will be able to keep a daily, even hourly, tally.

A system for worldwide use has been designed solely for confirming houses. A maximum of four months will be spent on monitoring a local installation before trying to market the system overseas.

This is the second time in a few weeks that Maule has put its sights on the overseas high-technolgy market.

Its computer application for the furniture industry, already in operation at some chains, is also aimed at overseas markets.

CSO: 5500/36

TELECOMMUNICATIONS SATELLITE STATION BUILDING BEGINS

Mbabane THE SWAZI OBSERVER in English 21 Oct 82 p 4

[Article by Jabu Matsebula]

[Text]

By JABU MATSEBULA
Features Editor

WORK on the construction of the ultra modern international communications satelite earth station has commenced with the construction of the building to house equippment.

The satelite earth station is being constructed at Ezulwini, at a site only kilometre from the Tea Road, and the building is being put up by D. Morreira who won the tender for the E13, 364.72 building last week.

The whole project which is financed through a loan by the Canadian Government, with the Department of Posts and Telecommunications putting up 15 per cent of the E4 million, is expected to be commissioned in July.

According to the acting Director of the Posts and Telecomunications Mr.N.R. Manana, Swaziland's present telecommunications network is heavily reliant on the South African network for transist facilities for all international calls either through South Africa's submarine cable network, or through South Africa's microwave system.

This means that for the planning of any circuits for Swaziland,s the co—operation of the South African Post Office is required. Planing and implementation of development projects for the Swaziland telephone and telex facilities thus depends heavily on the preparedness and capabilities of the South African Post Office.

Also a important consideration is that the lion's share of the revenue for international calls from Swaziland through the South African network, goes to the South African Post Office with Swaziland only getting a minimal share of between 6 to 15 per cent of total revenue from outgoing and incoming calls.

With the advent of a satelite communications facility, which will be of the standard Type B class with an antenae diameter of 12 metres equipped for 24 channels (twenty four different lines can be in use at the same time for international telephones and telexes) with ultimate capacity of sixty channels, Swaziland will now be to a large extent, independent for its international communications from any country.

The new satelite communications network will also mean some changes, and a great boon for our television network, as the Swaziland National Television Broadcasting will be able to arrange for live telecasts for local viewers of world news activities like the world soccer cup, important boxing matches or functions like the recent wedding of the heir to the British throne, Prince Charles and Lady Diana.

For this, SNTBC will have to install equipment capable of receiving programs beamed direct from the earth station, and according to acting Posts and Telecommunications director Manana, Government has already made an undertaking on behalf of SNTBC for the service.

The new development in the telecommunications of Swaziland means that the country can now link directly with other African countries with similar facilities, in line with the hopes of the Pan/African Telecommunications Network.

The equipment for the station will be provided by the Canadian electronic company Spar who will also send in a team of engineers to install it as soon as the building at Ezulwini is complete.

According to a study conducted by a Swedish engineer requested by the Government, the station is extremely viable. It is scheduled for commissioning by July next year (1983).

Also according to the Department of Posts and Telecommunications, the system to be installed is less vulnerable to long term outage because of breakdown and according to a study by the international satelite telecommunications association-INTESAT, the system has a 99.9 per cent reliability.

Though at the moment it is not known by how much, the rates for telephones and telexes will go up for the Swaziland consumer. Rates for overseas calls through the satelite network are regulated by the INTELSAT, but are likely to be higher than those within Swaziland, as according to Mr.B. Homberg, a Swedish telecommunications expert working on the satelite project, Swaziland's telephone and telex rates are one of the cheapest in the world.

CSO: 5500/41

DENMARK DEVELOPING COMPUTER DATA LINK SYSTEM FOR EC, U.S.

Copenhagen BERLINGSKE TIDENDE in Danish 14 Oct 82 Sect V p 1

[Article by Erik Bendt Rasmussen]

> [Text] Datacentralen in Denmark has established the world's largest data bank at the request of the EC Commission. Anyone with a computer terminal and a telephone can become a subscriber. Every 14 days the data bank is fed the latest statistics from the EC countries. The new service also will be sold to the United States and Canada.

CRONOS-EUROSTAT is the name of a new data bank at I/S Datacentralen in Valby. Anyone with a computer terminal and a telephone can pay to gain access to hundreds of thousands of facts on the EC and 200 developing countries with which the EC works. CRONOS is relatively new, but a dozen or so Danish export-oriented firms, public administrations, and ministries already have become subscribers.

New information comes in every 14 days from the Statistical Office of the European Communities in Luxemburg in the form of magnetic tapes. They are sent by plane to Datacentralen. The information is quickly fed into the data banks. It then is ready to be displayed on computer screens or printed out at the companies, administrations, and ministries that subscribe to the service. In this way, information on the EC and the 200 developing countries can be obtained 3 to 6 months before it is available in printed form.

Export Of CRONOS

Consultants Elizabeth Henning Jensen and Torben Friis of Datacentralen will travel this week to New York, Atlanta, and Ottawa to introduce CRONOS to businesses, public institutions, and ministries.

"The American food industry, for example, could benefit greatly from CRONOS," Elizabeth Henning Jensen said. "If an American company wanted to export goods to the EC or establish production in an EC country, it first would analyze the market. The figures required for the analysis could be gathered by a consulting firm. Statistics could be ordered from embassies or employees could be sent to Europe to gather information. This is expensive and difficult, however. With CRONOS the desired information could be obtained at a computer terminal the instant it is desired and if a printer is used information such as graphs, tables, and charts could be printed.

Analysis Of Industry

The American food industry could find out, for example, how much food is produced in the EC countries, how much is imported and exported, consumption trends, wages in the food industry, which branches of the food industry are expanding, and whether or not the industry is plagued by strikes. With this and much more information that can be retrieved by CRONOS, the American food industry could decide whether to export its products or establish a company in the EC.

Information On Developing Countries

"The American industry also can gather information country by country and find out where it would be most advantageous to establish a plant," consultant Elizabeth Henning Jensen said. "CRONOS can provide information on state subsidies, local subsidies, tax credits, energy prices, financing arrangements, etc. An American firm that wants to gain access to CRONOS contacts Datacentralen in Denmark through an American computer center, which sends inquiries via satellite to Stockholm from which the connection with Datacentralen is made."

Consumers who contract with Datacentralen pay 1,000 kroner for the search manuals. They are ring binders with information on the following main items: general statistics, agriculture and fishing, industry and service, national finances, foreign trade, and state investments in research. The cost of using CRONOS is 360 kroner per hour plus 10 kroner per time series. A time series is, for example, the number of newly registered automobiles in Denmark over a certain number of years.

"One special service available from CRONOS is information on the 200 developing countries with which the EC works. If Danish or foreign firms wish to export goods to or establish plants in Nigeria, for example, they can obtain all the relevant information on that country from CRONOS. Information can be obtained on the number of inhabitants, the number of inhabitants in large cities and in villages, consumer trends, consumer education, production, imports, exports, gross national products, energy, highways, etc.," Elizabeth Henning Jensen said.

Customers In Many Countries

CRONOS-EUROSTAT at Datacentralen also has customers for its information bank in Sweden, Finland, Germany, Holland, England, Ireland, France, Italy, Switzerland, Australia, Canada, and the United States. All the information can be ordered in German, English, or French.

CRONOS-EUROSTAT was established at Datacentralen in Denmark because Datacentralen is one of the largest computer services in Europe. When the EC Commission decided to establish the CRONOS-EUROSTAT data bank based on information from the Statistical Office of the European Communities, it was only natural that Datacentralen was chosen. CRONOS-EUROSTAT also has been established in France where it competes on an equal footing with Datacentralen for the sale and distribution of economic and social information on the EC.

Consultant Elizabeth Henning Jensen, CRONOS-EUROSTAT at Datacentralen, with search manuals for finding information. It is possible to find out, for example, how much shrimp is caught in the Danish section of the North Sea or what the dollar has done with respect to the Danish krone.

9336
CSO: 5500/2520

PHONE NETWORK SOON TO UNDERGO DIGITAL REVOLUTION

Copenhagen BERLINGSKE TIDENDE in Danish 2 Nov 82 p 6

[Article by Sv. Aa. Jensen: "New Telephone Numbers and Higher-Class Equipment in Few Years; Denmark on Threshold of Age of Digital Technology"]

[Text] It will be an exciting time for telephone users when Denmark in the near future enters the age of digital technology. It will completely revolutionize the way in which we communicate with one another over the telephone system. Along with this KTAS [Copenhagen Telephone Co.] is about ready to change its number system for reasons of lack of space. The space is to be increased tenfold and this entails the fact that all Danish telephone exchanges will get new 2-digit call numbers.

As soon as 1984 we will have to dial eight digits regardless of where we call in the country. If you are in the 01 area these two numbers will also have to be dialed. As of 1990 all the new exchange numbers will have been worked in and we will say goodbye to area numbers from 01 to 09. Prior to this time the old exchange area in Copenhagen City, for example, will get the digits 33 and it will thus be necessary to dial 33 15 75 75 in order to call BERLINGSKE TIDENDE. Århus will have 80, Aalborg 90 and Odense 60.

Conversation Becomes Numbers

"As of 1984 digital technology will be introduced at telephone exchanges and it will be more exciting for users in 1986 when it reaches individual telephone sets instead of starting and ending at exchanges," says Section Engineer Ole Bertram of KTAS.

What is digital technology?

"Said in a nutshell, a telephone conversation requires more than 64,000 pulses per second in both directions. The new optical fiber cables can transmit 140 million pulses per second and thus they can manage something under 2000 conversations at a time. That is digital technology."

"Conversation is converted in the telephone to electrical oscillations. They follow the voice's intensity all the way from one party to the other. But with the new technology oscillations can also be converted into speech. A computer at the exchange measures the voice on a scale which goes from plus 128 to minus 127. Not fewer than 8000 times per second the equipment comes in and checks the voice's oscillations on the scale. A number with the digits 0 and 1 is written out each time. At the receiver's exchange the pulses are again converted to oscillations which are transmitted to the telephone in the ordinary manner."

More Data Than Telephone Conversations

Distortion and muffling of conversations will almost disappear. There will no longer be "two on a line." It will be possible to see who is calling and if you are out traveling it will be possible by means of a simple procedure to let an acquaintance at another number take calls without the caller's being aware of it. It will be possible to connect computer systems and data teleprocessing systems to the telephone and KTAS is counting on such rapid development in this area that as of the turn of the century (with 1.7 million subscribers versus 1.1 million today) this will become a more important source of income than normal conversations. There will be 48 advanced special services in all. Subscribers who are opposed to the brave new world can console themselves with the fact that KTAS is keeping the old equipment alongside the new up to the year 2000. At this point it will all be converted to digital equipment and then the old system will be scrapped.

The new telephone number system, which will have been completely worked in by 1990, will be more logical than the old from a purely geographical standpoint. It will be possible to see by a number where subscribers live in the country. Østerbro will have the call numbers 35, Valby 36, Frederiksberg 38 and Ryvang 39. Denmark's first telephone subscriber, Privätbanken [The Private Bank], (C.F. Tietgen, KTAS's founder) in its time had the number 1, and even when six digits were introduced it was given all ones. Now with the new exchange number 33 will come before the six ones.

8985
CSO: 5500/2532

COMPUTER-CONTROLLED TELEPHONE EXPECTED TO BE MARKETED SOON

Copenhagen BERLINGSKE TIDENDE in Danish 15 Oct 82 p 3

[Article by Ejvind Olesen]

[Text] Denmark will receive new telephones--if KTAS (Copenhagen Telephone Co.) has its way, in any case. Their price will make them available to most people--and in this way they will get a taste of the computer age. Next spring the Danmark 1, 2, and 3 models will make their entry into Danish homes. The least expensive model of the new computer-controlled telephone costs 325 kroner, the intermediate model costs 555 kroner, and the most expensive model presumably will cost about 1,200 kroner.

The new phones are computer-controlled so that they operate as minicomputers and can function without being connected to the mains. They contain synthesized speech and two of the models can take messages. One of the models can be programed to request that the caller punch in his number. The phone owner then can retrieve and call the number when he comes home. Another model can be programed to give and take messages or refer the caller to a neighbor's number. It can be operated remotely from any push-button telephone and it can be converted to a car telephone.

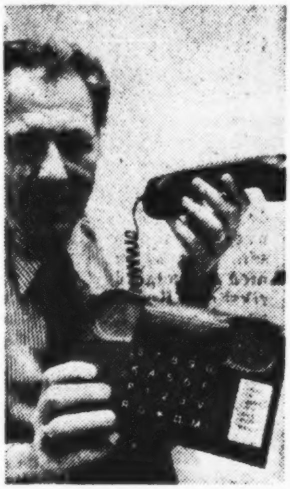
All the models have new signals with a total of 20 variations, compared to four at present. They also have soft cords, cords with plugs, and bright colors (10 different colors), and monitoring capabilities. Model 2, which now appears to be the best buy for a private customer, contains a call maker with 10 numbers that can be encoded and 20 additional numbers can be added.

It is not necessary to remove the receiver to speak over the telephone. Calls can be forwarded to any other number, including car telephones, with actual forwarding and not simply instructions to call the other number. The Danmark line uses the same eight numbers for 80 percent of all calls.

The new phones can be connected to older technology and old-fashioned switchboards. They cannot be ordered, but will be available beginning in May. The most expensive model will be available in the spring of 1984.

Rates Up

KTAS has just raised rates by an average of 13 percent. It still costs 1,220 kroner to obtain a telephone for the first time. Rates for short-distance calls were raised slightly more than those for longer distances. The highest increases will hit the 7 to 8 thousand customers who have their phone disconnected temporarily to save money. Ninety percent of these people are repeats from quarter to quarter. The cost of this will rise to 150 kroner--a 200 percent increase. The special services number eventually will pay for itself. This is not the case at present. It costs KTAS 5 kroner to make a wakeup call, while the company receives 2.50 kroner for this service. Now the price will rise to 3 kroner. The good news is that after 2000 rates still will be reduced by half.



9336
CSO: 5500/2520

BRIEFS

FIFTEEN TOWNS NOW RECEIVE TELEVISION--Monday at 1930 hours local time Greenland will enter the TV age for real, when the population of 15 towns and settlements on the west coast will get the opportunity for the first time to see television, which is transmitted simultaneously from Nuuk (Godthåb). Programs will be transmitted centrally from Nuuk via a radio link which is also being used for radio telephone, telephone and Telex communications. When the towns Narsaq and Qaqortoq (Julianehåb) are hooked up to the TV signal on 1 May three quarters of the people in Greenland will have the opportunity to see simultaneously broadcast programs. In addition, programs will be transmitted to a number of farther away places on videotape for transmission over a closed-circuit network. In recent years TV has made its entry into Greenland in the form of local television clubs which on a pirate basis have recorded programs on videotape from Danish television, which were transmitted to members over a closed-circuit cable network. The new simultaneous TV broadcasting section of Greenland Radio's management has the job first and foremost of putting a stop to the illegal pirate company. Individual Greenland-produced broadcasts will be transmitted but the majority will still originate from Danish television. But the tapping will now take place with the necessary permission and payment to copyright coholders. Introduction of simultaneous television broadcasting has cost a good 4 million kroner for establishment of a TV studio in Nuuk and the purchase of technical equipment. On top of this were 10 million kroner for making the radio link ready for TV use. [By RB] [Text] [Copenhagen BERLINGSKE TIDENDE in Danish 1 Nov 82 p 6] 8985

CSO: 5500/2533

SAT, CIT-ALCATEL, THOMSON WIN CONTRACTS IN AFRICA

Paris ELECTRONIQUE ACTUALITES in French 22 Oct 82 pp 1, 11

[Article by D. Levy: "French Telecommunications Make Entry into the East African Market"]

[Text] Nairobi--In connection with the UIT (International Telecommunications Union) Conference in Nairobi (see our last issue), the contract obtained by SAT (Societe Anonyme de Telecommunications) in Kenya to install five digital radio links, the delivery of CIT-Alcatel time-switching centrals to Uganda, and the order received by CIT/Thomson/Cables de Lyon/LTT (Ligne Telephonique et Telegraphique) from Somalia, represent the first successes achieved by French telecommunications manufacturers in East Africa. Access to this region has long been difficult for our industry, because of the British influence at first, and then because of the influence of Japanese ambitions.

However, and in particular thanks to our digital transmission and switching equipment, which despite what some people say, is well adapted to African utilization conditions, our industrialists seem to be in a position to confirm their present breakthrough in the region as long as financing obstacles can be overcome.

Kenya is an interesting country for telecommunications for two reasons: on one hand, it is aware of the need to invest in this sector (the second program for communications expansion, 1982-1986, is estimated at 125 million dollars, 44.7 million of which are financed by the World Bank); and on the other hand, it has decided to adopt digital technology. However, Kenya is a preferred Japanese area for telecommunications: Fujitsu for analog transmission, and Hitachi for electromechanical switching, have been awarded most of the projects financed by the World Bank, thanks to equipment offered at prices that defy all competition, combined with exceptional financing (such as 30-year loans at 3 percent, with a 10-year grace period). Only GTE, with the installation of a radio link within the Panaftel network, and Philips, with the Kenya-Sudan link (financed by the Netherlands), have countered to some extent the activity of the Japanese.

This will provide some idea of the importance assumed by the 68 million francs SAT contract (financed by the second Franco-Kenyan negotiations of last year) to supply five digital radio links that add up to 1180 km. This network will be operational in 1985. As the first French manufacturer to obtain an order from the Kenyan PTT (KPCT), SAT can reasonably hope to participate in the planned expansion and in projects in other neighboring countries, given the leading role played by Kenya in the area.

Quite recently, Thomson-CSF succeeded in gaining access to KPCT through a 4 million francs contract awarded to LTT for 7000 km of urban telephone cables. This first opening appears to be fundamental for ongoing projects, such as an international call for bids issued by Kenya for seven subscriber time-switching centrals (32,400 lines) and transit exchanges (3192 circuits). Thomson-CSF, the only French company to respond with its MT-20 and MT-25 installations, is competitive with the Japanese, Plessey (System X), LM Ericsson, and maybe Philips and ITT, for this 22 million dollar project financed by the World Bank. In addition, Thomson-CSF has sold four P-40 private exchanges to Kenya, and has just received acceptance for its P-20.

From Uganda to Ethiopia

In Uganda, CIT-Alcatel landed a 100 million francs contract for restoring the Kampala telephone network, which includes two E-10 centrals with a total of 30,000 lines (to be placed in service in 1984), and for installing a city network (given to Cables de Lyon). In that country, Thomson-CSF has also obtained a 50 million francs contract to provide FH150 radio beams for remote operation of signals on the Uganda railways.

In Somalia, a concern that includes CIT-Alcatel (for E10 exchanges), Thomson-CSF (for radio beams), as well as Cables de Lyon and LTT (for cables), has signed almost one year ago, a 450 million francs contract to modernize that country's telecommunications network by converting entirely to digital technology. A financing problem which blocks the deal still has to be solved. The manufacturers involved believe that this will happen before the end of the year.

In Djibouti, SAT has installed a 600 km radio link network that was inaugurated last May, which consists of FHD 234's on a 30-channel path, with extensions of 60 controlled channels and plans for installing a TV channel. In this country, CGCT (General Company for Telephone Construction) has obtained an order for an international switching center, while Thomson-CSF is conducting negotiations for military and civilian telecommunications (radio beams as part of Medarabtel), and Telspace is in the running for ground station projects.

The other French business in East Africa is rather marginal. TRT for instance, supplies mobile radio beams to Kenya's TV, Telspace has installed a ground station in Burundi, CGCT will deliver an international switching center to Aden (financed by Medarabtel) and has proposed the same equipment to Rwanda, while La Signalisation is installing a cable network in Nigeria.

The French manufacturers are pursuing other projects in East Africa, notably in Ethiopia and Botswana. After an abortive first attempt, the formulation of Franco-Ethiopian negotiations is being considered once more. It would assure the financing of a large telecommunications project (switching and radio links) whose call for bids is expected for early 1984. Another call for bids will come from Botswana next November, for supplying an entire digital network (transmission and switching). This project will be financed by the African Development Bank.

The SAT Radio Project in Kenya

The SAT radio project in Kenya consists of five digital links for the country's northwest; in its entirety, it will form an 1180 km linked network composed of SAT's FHD 234 radio beams, operating at 2 GHz and 34 Mbits/sec (480 channels). The major original feature of the project is a 1+1 network configuration (one normal and one emergency channel) with the placement of a 34 Mbit/sec digital TV channel on the emergency beam. This is a world first. Another notable feature is that 17 of the 34 radio stations will be solar powered, at a peak power of 2880 W per station, which will make the network the largest installed power solar installation. The final receipt of the equipment is planned for the beginning of 1985.

The frequency plan adopted for this project consists of two sidebands to optimize the utilization of the frequency plan, and to allow future expansion up to a 5+1 configuration. This means that the network will eventually have five 480-channel telephone carriers (amounting to about 2000 telephone channels) and a TV channel.

For the signalization interfaces, all the channels will be equipped with a bi-directional, multiple-usage GAS (signalization adaptation system) which offers five modes of utilization. Therefore, while KPTC plans to install manual exchanges in all the demodulation stations, these exchanges will eventually be replaceable with automatic (if not digital) systems by simple card strapping; the bi-directional GAS makes it possible to change utilization without changing equipment, thus evolving with the customer's needs. Just as for the system's capacity, SAT has opted for long range engineering.

These possibilities are characteristic of the FHD 234, designed as a system that could meet all the configurations encountered in exportation. In addition to the transmitter-receiver, SAT has developed for this radio beam a sophisticated automatic switching device which allows the monitoring of 32 stations (and 32 events per station) and offers five remote controls. As another example of flexibility, the manufacturer has provided the network with digital handling capabilities (at 2 Mbits/sec) of channels in the network nodes, for (manual) rerouting in case of failure in one branch.

With the KPTC project, SAT has thus shown that it is capable of handling a complex network, at the same time solving problems that were not particularly in its specialty (such as optimum location of solar panels in this equatorial region, as well as the design of buildings to assure the best possible natural ventilation). So much for the technical features. In another context, Mr Boulin, chief executive of SAT, did not fail to point out the very difficult working conditions that will face the technicians who will install the network, notably the region's insecurity--hence the request for military escort in Kenya--and the total autonomy of the installers at work sites. Installation of this radio equipment will be started early in 1983 by seven SAT engineers, each accompanied by four Kenyan technicians, responsible for one station.

11,023
CSO: 5500/2350

BRIEFS

FINLAND JOINS EURONET--The data processing network, Euronet, which went into joint operation in mid-February 1980, is to be linked to the corresponding network in Finland. This had been proposed by the European Community Commission to that body's Council of Ministers. Similar agreements had been signed in 1979 and 1981 with Switzerland and Sweden. The agreement calls for Finland to assume a prorated share of the investment costs for the Euronet after receiving initial financial and technical assistance. [Text] [Wuerzburg ELEKTROTECHNIK in German 9 Jul 82 p 6] 9878

CSO: 5500/2508 END

JPRS 82418

8 December 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 251

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 82418

8 December 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 251

CONTENTS

ASIA

AUSTRALIA

Report Predicts Ruin for Telecom if Its Monopoly is Ended
(THE AUSTRALIAN, 1 Oct 82) 1

INDIA

Government Review on Failure of INSAT-1A Reported
(THE SUNDAY STATESMAN, 7 Nov 82; THE TIMES OF INDIA, 8 Nov 82) 2

Press Agency Report
Space Commission Chairman Comments

Briefs
Goa TV Relay Station 5
Television New Exchange 5
Port Blair TV Relay 5

PAKISTAN

Plans for Half a Million New Telephone Connections
(MORNING NEWS, 15 Nov 82) 6

Space Research Progress Reviewed by Official
(Salim Mehmud; ISLAMIC DEFENCE REVIEW, Vol 7 No 3, 1982) .. 7

Pakistan To Join Pool
(THE MUSLIM, 8 Nov 82) 13

Briefs
Faulty Telex System 14
Important Research Achievement Reported 14

SRI LANKA

Briefs
Deniyaya Station Begins FM Stereo Broadcasting 15

LATIN AMERICA

ARGENTINA

Briefs
New Telephone-Telex Network 16
Radio Stations Authorized 16

BARBADOS

Senator Calls for Government Takeover of Communications (THE NATION, 4 Nov 82) 17

TRINIDAD AND TOBAGO

Briefs
New Phone Exchanges 18

NEAR EAST AND NORTH AFRICA

MOROCCO

Radio Station for the Maghreb Reviewed (Annick Cojean; LE MONDE, 9 Nov 82) 19

SYRIA

Telephone Services in Latakia Province Examined (Zuhayr Jabbur; AL-BA'TH, 15 Oct 82) 23

SUB-SAHARAN AFRICA

LIBERIA

LTC Official Notes Problems Facing Corporation (Rufus M. Darpoh; NEW LIBERIAN, 26 Oct 82) 29

TANZANIA

Briefs
Manual Telephone Exchanges Installed 31

ZAIRE

Briefs
New Television Transmitter 32

WEST EUROPE

INTERNATIONAL AFFAIRS

Nordic Mobile Telephone System Gaining Subscribers
(Erik Bjørnskau; AFTENPOSTEN, 27 Oct 82) 33

FRANCE

Problems of Export of TV Programs to Canada Discussed
(Annick Cojean; LE MONDE, 23 Oct 82) 35

ICELAND

Phone-Line Net Expected To Be Completed Around Country by 1984
(MORGUNBLADID, 29 Oct 82) 39

NORWAY

Minister Discusses Government Policy on Cable Television
(Morten Malmø; AFTENPOSTEN, 28 Oct 82) 40

Introduction of Advanced-Technology Phone Announced
(Erik Bjørnskau; AFTENPOSTEN, 29 Oct 82) 42

Telecommunications Agency Chief Discusses Advances, Policy
(Knut Løvstuhagen; AFTENPOSTEN, 29 Oct 82) 44

REPORT PREDICTS RUIN FOR TELECOM IF ITS MONOPOLY IS ENDED

Canberra THE AUSTRALIAN in English 1 Oct 82 p 3

[Text] **CHIEFS** of Telecom Australia and a private telecommunications consortium were last night awaiting copies of a report which warns of dire consequences for Telecom if private enterprise is allowed to compete with it.

Telecom could lose $120 million revenue a year if its monopoly on long-distance telephone services is lost, the study finds.

Senior management from Telecom and the Sydney-based Business Telecommunications Services group were hesitant last night about commenting on the study, conducted by British consultancy group, Logica Pty Ltd.

Commissioned by the Australian Telecommunications Employees Association, the study says open competition would cripple Telecom financially, forcing it to rely for survival on substantial government subsidies.

It warns also that ordinary subscribers, particularly in country areas, would be left with deteriorating services and soaring bills because competition would cut into the profits on lucrative services such as the Sydney-Melbourne STD link, with which Telecom subsidises uneconomic zones.

The study was commissioned in response to the Federal Government's setting up of the Davidson Committee of Inquiry into Telecom, which many observers expect to recommend a private telephone "super-group" be allowed to compete with Telecom.

Challenge

The chairman of Telecom, Mr Robert Brack, would make no comment before studying the Logica report, a Telecom spokesman said in Melbourne last night.

In Sydney, a spokesman for the general manager of BTS, Mr Peter Holmes a Court, said BTS executives had not yet received copies of the report.

BTS was formed in 1980 by 12 major Australian companies to challenge Telecom's monolopy. But of the founding members only Mr Kerry Packer's publishing and broadcasting group, IBM, AMP, ACI and the Myer Emporium remain.

The major findings of the Logica study are that:

A PRIVATE telephone company could establish an extremely profitable business.

THIS development would severely damage Telecom, which would require "significant subsidies" to survive.

SIGNIFICANT increases in call charges would result. The cost of a local call would rise by 28 per cent, and STD calls by at least 17.5 per cent.

CSO: 5500/7510

GOVERNMENT REVIEW ON FAILURE OF INSAT-1A REPORTED

Press Agency Report

Calcutta THE SUNDAY STATESMAN in English 7 Nov 82 p 1

[Text] New Delhi, Nov 6--"Minor deficiencies" in the spacecraft and in ground control were responsible for the failure of the Indian National Satellite, INSAT-1A, reports UNI, quoting the Review Committee of the Government.

In its report to the Government, the committee, which went into the causes leading to the loss of "the spacecraft," however, expressed the opinion that the basic design of the spacecraft was sound.

The failure of the satellite on September 4 was due to "complex interplay of relatively minor spacecraft deficiencies," it said. There were also certain unforeseen events which under normal circumstances were extremely unlikely to cause a catastrophe.

The spacecraft having an undeployed solar sail had entered the eclipse season beginning August 31. The ground controller had prepared for the eclipse operations a few days earlier.

However, on September 4, some deficiencies in ground control software, lacunae in contingency operations procedures and unexpected onboard anomalies caused things to come to a head in about one hour and 16 minutes culminating in the spacecraft being shut down, the report said.

Narrating the sequence of incidents which led to the failure of the satellite, the report said earlier during the satellite's orbit raising sequence, the solar sail boom had failed to deploy.

On September 4, a modest yaw build up which had occurred on the spacecraft was being slowly removed by the spacecraft's autonomous control system. ("Yaw" in spacecraft's reference system is rotary motion about a line between the satellite and the centre of the earth).

The computer programme on the ground failed to predict the intrusion of the bright full moon, after the eclipse interval following the expected sun-intrusion, within the field of view of the spacecraft's earth sensor due to an inadequate data base.

Suitable modifications are being incorporated in the INSAT-1B spacecraft scheduled for launch by STS-8 in mid-1983, to preclude a recurrence of the INSAT-1A events. The most significant of these changes is the incorporation within the satellite of an automatic switch to omni-directional telemetry in the event of loss of earth pointing. In addition, the propellant isolation valve control circuitry has been modified to eliminate the possibility of unexpected valve statua transfers.

These modifications are being incoporated in the INSAT-1B spacecraft which is currently being prepared for thermo-vacuum testing at Ford Aerospace's facility in Palo Alto.

In addition, minor design modifications on solar sail boom assembly and antenna deployment and tie-down arrangements to have already been implemented to avoid the recurrence of deployment anomalies experienced in INSAT-1A. Additional tests under near zero-G conditions have also been added to prove proper functioning of the modified deployment mechanisms.

Space Commission Chairman Comments

Bombay THE TIMES OF INDIA in English 8 Nov 82 p 18

[Text] New Delhi, November 7--Following the failure of the first INSAT spacecraft, the launching of the next one is being delayed with a view to taking corrective measures in the fabrication of INSAT-1B.

The second multi-purpose satellite was to have been launched by the space shuttle on July 4 next year, some 18 months after the launching of INSAT-1A.

A detailed review of the failure of the INSAT-1A presented to a parliamentary consultative committee yesterday brings out the fact that the ill-fated spacecraft was struck by not one but several failures. None of these failures is uncommon but what is not very common is a single spacecraft being subjected to multiple failures.

Prof S. Dhavan, chairman of the space commission, told the committee that a full review of INSAT failure was on and definite conclusions could be arrived at when the review was over.

Propellant Loss

However, a preliminary reconstruction of events indicated that propellant loss was most probably caused by the failure of an oxidiser latch valve to open when command was sent to support the spacecraft in the "safe" sun-acquisition mode.

Telemetry failure prevented timely recognition of the problem and, meanwhile, the automatic mode of thruster operation would appear to have drained away fuel. In the absence of oxidiser and hence of combustion in the thruster chambers, the fuel drained out faster than the normal rate.

The cause of orientation loss was not yet understood. It lost its orientation towards earth on September 4 following an abnormal drift around the north-south axis. This resulted in the loss of normal telemetry signals.

Earlier, soon after the launch, the C-band antenna and solar panel deployment posed problems. Despite several operations, the solar sail could not be deployed.

Thermal constraints resulting from non-deployment of the solar sail, however, affected the S-band TV transponder operation in terms of length of continuous operation and the obtaining of full-earth scan images every half hour throughout the day as originally envisaged.

Extra expenditure of on-board fuel during orbit-raising and station acquisition in final orbit and the additional on-orbit fuel expenditure resulting from the non-deployment of sail were estimated to have reduced the INSAT-1A life to about two and half years, less than half the normal span, even before the total failure of the spacecraft.

However, Prof Dhavan justified the basic design of the multi-function satellite and said that even a single-mission satellite could have faced such problems. The members were told that the "multi-mission requirements are sound and feasible and that the basic design of INSAT is sound."

The next INSAT is also being manufactured by the U.S. company, Ford Aerospace, which was the prime contractor for the first spacecraft. However, the spacecraft contractor also has interest in continued satisfactory operation of a satellite since part of payment is tied up with performance.

More Rice Procured This Year

New Delhi, November 7, (UNI)--Rice procurement has so far been better than last year's, with the total reaching 1.26 million tonnes.

The corresponding figure for last year was 1.14 million tonnes.

Punjab leads with a contribution of 1.08 million tonnes followed by Haryanna with over 81,000 tonnes. The corresponding figures for the two states last year were one million tonnes and 64,000 tonnes, respectively.

Uttar Pradesh has so far procured 11,903 tonnes and Tamil Nadu 88,940 tonnes.

CSO: 5500/7030

BRIEFS

GOA TV RELAY STATION--Panaji, November 5--The proposed Goa TV relay station is expected to have a range of 25 kilometres, according to Mr H.P. Bhatikar, chief engineer (western zone), All India Radio and Doordarshan. The people in the major towns like Mapuca, Margao and Ponda besides Panaji, will be able to view the relayed programmes. Mr Bhatikar has said that trial runs of the station have shown clear reception in the towns and surrounding areas. The areas on the fringes of the 25 km range may receive TV programmes with the aid of a booster. [Text] [Bombay THE TIMES OF INDIA in English 6 Nov 82 p 3]

TELEVISION NEW EXCHANGE--New Delhi, November 7--(UNI): India has taken the initiative for exchange of television news among the nations of the sub-continent. This proposal, aimed at correcting the imbalances in the information flow from the West has found favour with Pakistan, Sri Lanka, Iran and Bangladesh, according to Doordarshan authorities. Doordarshan hosted a meeting in Bombay recently to discuss the modalities of this scheme as exchange of news among these countries was negligible at present. It was decided that a co-ordinating central be set up either in India or Iran for preparing the news capsule for telecast in these countries. The news could also be exchanged through telex in the early part of the day. Doordarshan sources said the recording would be on video-cassettes. These would be prepared at the co-ordinating centre from material sent from all the five countries, including India. These cassettes would then be despatched by air to collaborating countries. The sources said it was for the Asia Pacific Broadcasting Union secretary-general, Mr Roko Ito, to decide where the co-ordinating centre should be located. This would be known only in January. [Text] [Bombay THE TIMES OF INDIA in English 8 Nov 82 p 4]

PORT BLAIR TV RELAY--A low-power TV relay centre will soon be set up at Port Blair. The centre will telecast Asiad 82 from November 19 with the help of INTELSAT. After the Asiad, other national programmes of the Delhi station will be relayed by this centre, according to a PIB announcement on Tuesday. [Text] [Calcutta THE STATESMAN in English 3 Nov 82 p 3]

CSO: 5500/7031

PLANS FOR HALF A MILLION NEW TELEPHONE CONNECTIONS

Karachi MORNING NEWS in English 15 Nov 82 p 6

[Text] The Federal Government proposes to install 5 lakh new telephone connections all over the country at a cost of Rs 14,000 million during the sixth Five-Year Plan period.

Official sources told PPI here yesterday that the main emphasis during the Five-Year Plan to be launched from July, 1983, would be to switch over to the electronic technology system.

They disclosed that three electronic imported telephone exchanges, each with a capacity of 10,000 lines, would be installed during the Five-Year Plan period at Karachi, Lahore and Islamabad. Contracts for the installations of these exchanges would be awarded soon to foreign companies of Europe, USA and Japan.

Pakistani engineers and technicians will also be trained in the electronic technology. A long-term plan for their training abroad has already been finalised.

These sources also stated that in the first year of the Five-Year Plan (1983-84) a total of 70,000 new telephone connections would be provided in the country.

Meanwhile, 6,000 new telephone connections have been provided in the Karachi tele-communication region during the first four months of the current financial year. In all, a total of 21,000 new connections are to be provided in the city during 1982-83 at a cost of Rs 420 million.

The Government these sources said, has also directed that the existing capacity of telephone exchanges in Karachi should be raised to 90 per cent.

At present, the installed capacity of exchanges in Karachi was 1.23 lakh whereas 1.4 lakh telephones are working.

Likewise steps are under way to achieve a load capacity of 90 per cent for the telex exchange in Karachi.

The installed capacity of telex exchange in the city is 2,000 and 1,575 telex machines are working one hundred new telex connections were given from July to October this year and another 125 will be provided during the next eight months.--PPI.

CSO: 5500/4312

SPACE RESEARCH PROGRESS REVIEWED BY OFFICIAL

London ISLAMIC DEFENCE REVIEW in English Vol 7, No 3, 1982 pp 26-30

[Article by Salim Mehmud, chairman, Pakistan Space & Upper Atmosphere Research Commission]

[Text]

Pakistan Space & Upper Atmosphere Research Committee commonly known by the abbreviated name of SUPARCO, was established in 1961 for undertaking space research to promote peaceful exploration and applications of space science and technology in Pakistan. While pursuing this objective it is quite natural that SUPARCO's programmes would also contribute toward building up national scientific and technological potential. The principal applications programmes are aimed at bringing about socio-economic uplift of the masses. The thrust of these programmes is in the areas of satellite communications, satellite remote sensing and study of natural and physical phenomena in upper atmosphere and space.

SUPARCO's first project saw through setting up of a rocket launching station at Sonmiani Beach, about 50 kilometers North West of Karachi in early 1962. An imported two stage sounding rocket was launched from this range, on 7th June 1962, which achieved height of about 160 kms. Since that historical event SUPARCO has launched over 200 rockets to perform scientific experiments between altitude of 20 and 450 kms. A number of these experiments were conducted under joint programmes of SUPERCO and its counterpart agencies in the United States, France and the United Kingdom.

It was decided that Pakistan should have the capacity to manufacture rockets required by SUPARCO in its scientific research programme. This goal was realised and SUPARCO now operates a full-fledged rocket production plant which manufactures rockets starting with basic raw materials. Rockets produced at this Plant have soared to heights in excess of 500 kms. The Plant has facilities for manufacturing complete rocket engines, and their propellants. The rocket fabrication activities are supported by quality control and inspection at each and every crucial stage because of requirement of exacting standards of performance and safety. Not only this, complete rocket motor can be fired on a static test bench which holds it captive and the performance of the engine carefully monitored and recorded before the rocket is actually cleared for flight. Electronics plays an extremely vital role in space research — in fact no worth its name work in space science can be done without it. The electronic instrumentation is responsible for firing control of rockets, tracking of rockets during their flight, relay of data from rockets/satellite to ground and their control from ground. These are just a few of the items of long list of roles in which electronics is responsible for lifting space science and technology to new heights. Having fully realised the importance of electronics in space research, SUPARCO has established Instrumentation Laboratories which cover diversified fields of electronics such as microprocessors and digital circuit design, telemetry systems, control elements, satellite ground stations — just to name a few. On top of that, the equipment for use on board rockets has to be put through special environmental testing procedures to ensure that it will withstand the vibrations during rocket flight and extremes of space environment. The laboratories do have provision to perform those tests. In all there is a galaxy of latest and sophisticated electronic test, measuring and calibration equipment set in spacious and fully air-conditioned laboratory space to perform the high technology work by a dedicated team of highly qualified professionals.

The engineers of these laboratories have developed a number of electronic equipments like frequency counters, power supplies, time signal receivers, interface for transmission of digital information, a programmable digital controller etc.

Their current efforts are concentrated for the development of number of equipments for the satellite ground receiving stations. Already high gain dish antennas, pre-amplifier units, down converters and other circuit components have been developed. Using some of these sub-assemblies, a satellite ground receiving station has been assembled for reception of television programmes from direct broadcasting satellites (DBS). The inexpensive station will enable domestic TV receivers to directly receive T.V. programmes from D.B. Satellites. The station has now been trial running for several months and has given satisfactory service.

The launching of rockets is done from Sonmiani Beach overlooking the Arabian Sea. The range is spread over an area of 500 acres and has facilities required to conduct scientific rocket experiments. These facilities comprise different types of launchers, rocket assembly workshop, payload preparation area, high speed tracking radar and digital computer (for tracking of fast moving rockets in flight and charting of their flight path), rocket launching control room, telemetry station for receiving scientific data from rockets during their flight, communication equipment, optical cameras and maintenance workshops.

The Space Research Centre next to Karachi University has divided its activities into three main areas, namely:

(a) Planning of scientific rocket launching experiments and analysis and interpretation of data received through rocket launching experiments or different types of satellites.

(b) Ionospheric research.

This aims at the study and behaviour of electrons in the altitudes between 40 kms and 600 kms. The electrons at these altitudes form an 'umbrella' over the Earth. One of the important utility of this electron umbrella is to reflect the shortwave radio signals to ground thus making long distance radio communications possible. The ground equipment used for ionospheric research detects even minor disturbances in the overall population density of electrons. These disturbances are mainly caused by the solar flares. When solar flares activity of sun is intense, the shortwave radio signals fade out or even at times are totally blacked out.

(c) Satellite remote sensing.

This area of activity concerns with collection of pictures of the Earth which are on a normal film and computer compatible tapes taken by the satellite based cameras and relayed to the ground stations. SUPARCO has necessary equipment to analyse and interpret these pictures for natural resources studies. Some of the completed studies relate to: morphology of Indus delta and adjoining coastal belt of Pakistan; identification of crops and estimation of acreage of different crops; snow survey in catchment areas of Indus basin rivers for estimation of water run-off; charting of river courses; mapping of areas under flood and localisation of weak spots of rivers giving rise to flooding; geology and minerology. The current projects are: extent of area under cotton crop and to see whether infestation can be detected; digital computer assisted mineral resources survey; water-logging and salinity studies etc. There are already 40 national agencies who are making use of the services offered by the Remote Sensing and Applications Centre.

SUPARCO has been put through complete reorganisation which was ordered by the President in December 1980. Through promulgation of Presidential Ordinance in 1981, SUPARCO is elevated to the status of a Commission. The work of the Commission is guided by the Space Research Council which is headed by the President himself. SUPARCO has drawn up a scheme of long term programmes of space science and technology which essentially stresses upon:

(a) Establishment of ground receiving stations of different types to receive data from satellites

(b) Installation of suitable equipment to track satellites, and

(c) Launching of national communications satellites.

SUPARCO also has a project aimed at acquiring mobile equipment for monitoring of environmental pollution and ozone concentration using laser beam. The data thus collected will be correlated with data obtained from environmental pollution monitoring satellites. The existing facilities for analysis and interpretation of pictures of the Earth sent by satellites will be enhanced through the use of digital computer analyser equipment which will directly use picture information stored on computer compatible tapes for its input. The introduction of new equipment will greatly increase the flexibility, capability and speed of analysis work.

SUPARCO maintains regular liaison with its counterpart international space organisations. Pakistan is a Member of the Committee on Space Research (COSPAR) and the United Nations Committee on Exploration and Peaceful Uses of Outer Space. SUPARCO's experts represent Pakistan on these international bodies and have made significant contributions in the work of these bodies.

Since the areas of work in which SUPARCO is engaged are highly specialised, it is necessary that SUPARCO should have an inhouse specialist studies and training institute for its scientists and engineers. SUPARCO is in the process of preparing a detailed project proposal for establishment of an Aerospace Institute at the Campus of Space and Atmospheric Research Centre near Karachi University. This Institute will provide facilities for induction of large number of scientists and engineers for training and higher studies in aerospace technology. As an interim measure regular courses are being conducted at SUPARCO's Instrumentation Laboratories Orientation Training Centre for all the newly inducted scientists and engineers. The course work imparts theoretical and practical instructions in various disciplines of space science and technology and extends upto 9 months. Those of the scientists and engineers who are extra bright and it is necessary that they be trained abroad for a specific project are placed in foreign universities/ training establishments of repute.

National space science and technology programmes in developing countries are no more a luxury but a necessity. Not to make use of spin off benefits of space technology would tantamount to ignoring powerful techniques which can assist these countries in their socio-economic uplift. The work which SUPARCO is undertaking would have a direct bearing in improving the quality of life of people of Pakistan. As an added bonus and of great significance too SUPARCO's activities should contribute toward rekindling the interest of young Pakistanis in science and technology and provide facilities for them to carry on with their scientific pursuits once they have finished their formal education. The spin offs of space technology are already impinging upon our daily lives in multiple ways: satellite T.V. and telephone service, pocket calculators, microcomputers, digital watches, intricate medical diagnostic aids, detection and better management of natural resources are just a few examples. There is therefore a strong case for promoting peaceful applications of space science and technology in Pakistan. SUPARCO after its reorganisation is making good progress in moving toward that end. With the legitimacy given to SUPARCO, for the first time since its creation in 1961, through promulgation of Presidential Ordinance in 1981, and support from the highest level of the Government, SUPARCO should be able to realise its aims and objects and truly stand for advancement of science and technology in Pakistan.

CSO; 5500/4312

PAKISTAN TO JOIN POOL

Islamabad THE MUSLIM in English 8 Nov 82 p 4

[Text] NEW DELHI, Nov. 7:. India and four other Asian countries will exchange television programmes on videotape cassettes from February, according to officials at 'Doordarshan", the Indian television network.

They identified Pakistan, Iran, Bangladesh and Sri Lanka as the other countries participating in the project.

The exchange programme would initially be carried out on an experimental basis for six weeks, the officials said. It was designed to ensure proper projection of regional events in each of the five countries and to enable them to exchange developmental news.

The video cassettes would be air-freighted.

The officials said a co-ordinating centre for the project would be set up in January, after the Asia-Pacific Broadcasting Union had agreed on its location.

Representatives from the five participating countries held informal discussions regarding the project in Bombay last week.

Meanwhile the five ASEAN countries—Thailand, Indonesia, Philippines, Singapore and Malaysia—have undertaken a similar venture with the help of "Palpes", the Indonesian satellite.

At a later stage, all the broadcasting unions in the world are expected to enter into an agreement to lease some channels of the Intelsat for exchange of programmes among the member countries, according to Doordarshan officials.—PTI

CSO: 5500/4310

BRIEFS

FAULTY TELEX SYSTEM--SIALKOT, Nov 7--The Secretary General of the Sialkot Advisory Committee on Telecommunication, Mr. Imtiaz Elahi, expressed concern over the everyday breakdown in the telephone and telex system here. He accused the local telephone authorities for laying cables in improper way. He said that it had added to the difficulties of the subscribers who already have the problems of wrong billing. He said that the telex subcribers were paying Rs. 2500 as monthly rent but most of the time telex system seems to remain dead for the last two months. Thus the people were facing great problems and heavy losses in the absence of the telex. "Karachi DAWN in English 8 Nov 82 p 4]

IMPORTANT RESEARCH ACHIEVEMENT REPORTED--ISLAMABAD, Nov. 7--A research team of the Physics Department, Quaid-e-Azam University led by Dr. M. Zafar Iqbal has produced a 'single crystal of Germanium', a heavy semi-conductor meterial on November 1 for the first time in this country. This scientific work signals an important landmark in as much as the single-crystal semiconductor materials form the basis for the vast veriety of electronic devices such as the transistors, micro-chips integrated circuits and solar cells etc, which are today playing a basic role in the process of industrialisation. This achievement marks the beginning of a fruitful collaboration between the Semiconductor Physics research team of Quaid-i-Azam University and a possible electronic device manufacturer of tomorrow in Pakistan, namely the Central Telecommunications Research Laboratories which could use this capability of indigenously fulfil the future needs of the telecommunication systems of the country. Other organisations such as the National Institute of Electronics, Fauji Foundation Microelectronics Project and the Carrier telephone Industries may also benefit from this development in future. The single crystal has been given a beautiful vas vase-like shape and weighs over half a kilogram with a length of more than fou four inches. The top portion displays hexagonal crystalline symmetry and has a maximum width of over two inches. Two M. Phil level research students have also been trained during this work. [Islamabad THE MUSLIM in English 8 Nov 82 p 3]

CSO: 5500/4310

BRIEFS

DENIYAYA STATION BEGINS FM STEREO BROADCASTING--The Sri Lanka Broadcasting corporation started transmitting FM stereo from its Deniyaya station on October 21 and its first program from this station was the presidential election results. This new channel will cover Galle, Matara and Tangalla districts. Earlier, listeners in these areas were not able to receive FM stereo transmitting, said the chairman, Mr. Eamon Kariyakarawana. The new service was introduced when the stereo transmitions from Radella and Colombo proved successful. [Colombo DAILY NEWS in English 30 Oct 82 p 1]

CSO: 5500/4311

BRIEFS

NEW TELEPHONE-TELEX NETWORK--A new 1,260-channel telex and telephone network joining the cities of Cordoba and Mendoza will be dedicated on 17 November. [PY212346 Buenos Aires Domestic Service in Spanish 2000 GMT 16 Nov 82]

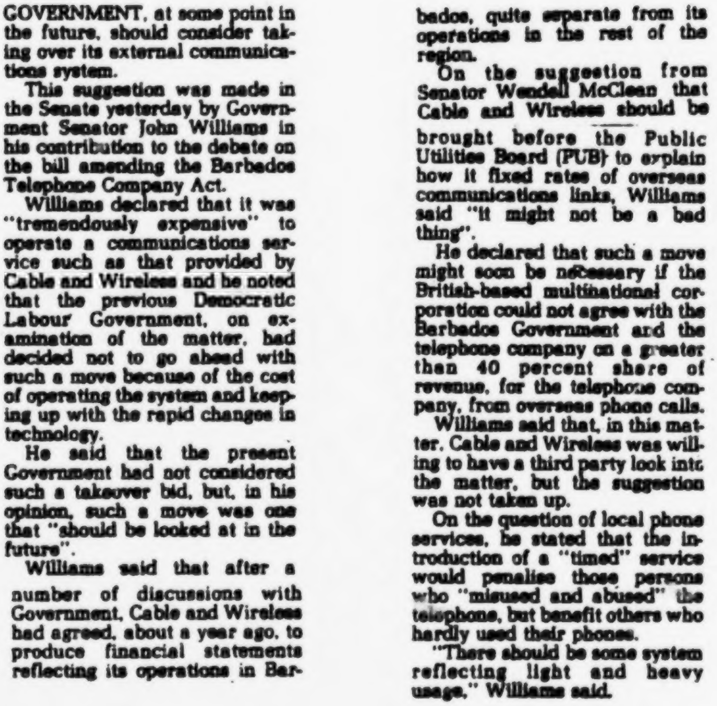
RADIO STATIONS AUTHORIZED--Buenos Aires, 9 Nov (NA)--The executive branch has granted the firm Desup S.R.L. headed by Adolfo Antonio Critto, Hernando Campos Menendez and Virgilio Alberto Tedin Uriburu, permission to operate LR9 radio Antartida of Buenos Aires. The executive branch also granted the firm Dimension Integral de Radiodifusion S.R.L. permission to install and operate a a radio station in San Luis. This firm is headed by Eduardo Alberto Cometto and Iri Elvira Torrado de Cometto. [PY111321 Buenos Aires Noticias Argentinas in Spanish 2115 GMT 9 Nov 82] Buenos Aires, 2 Nov (DYN)--The executive branch has authorized Radioifusora del Nordeste S.A. to install a radio station in Resistencia, Chaco Province. [PY111321 Buenos Aires NOTICIAS ARGENTINAS in Spanish 1548 GMT 2 Nov 82]

CSO: 5500/2018

SENATOR CALLS FOR GOVERNMENT TAKEOVER OF COMMUNICATIONS

Bridgetown THE NATION in English 4 Nov 82 p 16

[Text]



GOVERNMENT, at some point in the future, should consider taking over its external communications system.

This suggestion was made in the Senate yesterday by Government Senator John Williams in his contribution to the debate on the bill amending the Barbados Telephone Company Act.

Williams declared that it was "tremendously expensive" to operate a communications service such as that provided by Cable and Wireless and he noted that the previous Democratic Labour Government, on examination of the matter, had decided not to go ahead with such a move because of the cost of operating the system and keeping up with the rapid changes in technology.

He said that the present Government had not considered such a takeover bid, but, in his opinion, such a move was one that "should be looked at in the future".

Williams said that after a number of discussions with Government, Cable and Wireless had agreed, about a year ago, to produce financial statements reflecting its operations in Barbados, quite separate from its operations in the rest of the region.

On the suggestion from Senator Wendell McClean that Cable and Wireless should be brought before the Public Utilities Board (PUB) to explain how it fixed rates of overseas communications links, Williams said "it might not be a bad thing".

He declared that such a move might soon be necessary if the British-based multinational corporation could not agree with the Barbados Government and the telephone company on a greater than 40 percent share of revenue, for the telephone company, from overseas phone calls.

Williams said that, in this matter, Cable and Wireless was willing to have a third party look into the matter, but the suggestion was not taken up.

On the question of local phone services, he stated that the introduction of a "timed" service would penalise those persons who "misused and abused" the telephone, but benefit others who hardly used their phones.

"There should be some system reflecting light and heavy usage," Williams said.

CSO: 5500/7513

TRINIDAD AND TOBAGO

BRIEFS

NEW PHONE EXCHANGES--THREE new telephone exchanges at San Juan, Diego Martin and St. Augustine will be commissioned next month by the Trinidad and Tobago Telephone Company. This was revealed by Senator John Eckstein, Minister of Public Utilities and National Transportation at the ninth annual long service and achievement awards ceremony of the Telephone company on Saturday night at the Trinidad Hilton Hotel. Senator Eckstein told the gathering that within the past 12 months, the telephone company had commissioned exchanges at Couva, Piarco, San Fernando, Chaguanas and Maraval. In addition, he said, just one week from now a second tandem switch would be put into service at Nelson Exchange to improve the quality of service to all existing subscribers and would also give the company the capacity to expand its subscribers base. The minister said he had been assured by the management that with the commissioning of the new tandem switch the company would be able to provide an additional 5,000 subscribers with service before the end of 1982. He added that this figure would be augmented by another 30,000 in 1983. [Port-of-Spain TRINIDAD GUARDIAN in English 25 Oct 82 p 1]

CSO: 5500/7511

RADIO STATION FOR THE MAGHREB REVIEWED

Paris LE MONDE in French 9 Nov 82 p 19

[Article by Annick Cojean: "Medi-1 in Tangiers--A Different Kind of Radio for the Maghreb"]

> [Text] Radio Mediterrannee Internationale, the fruit of financial and technical cooperation between France and Morocco, is going to abandon the medium waves on which it has been broadcasting since September 1980 and, starting on 15 November, go into the long waves (1,740 m). It will thus cover not only all of Moroccan territory but also Algeria, Tunisia, even part of Libya and Mauritania, as well as a bit of Spain and perhaps as far as Toulouse. An indisputable success for this young radio station which, on an annual budget of Fr 11 million for 17.5 hours of broadcasting per day, is already achieving listener rates ranging from 30 to 80 percent in the north of Morocco.

Tangiers (from our special correspondent)--When the fall of evening gives Tangiers the bluish and magical colors of nearly oriental cities, when Place du Grand-Soko becomes that strange place of rendezvous, exchanges and roguery that have made it world-famous, when the cafes fill and the kef pipes are already going from hand to hand, a noise arises, crescendo, of human voices, of children's shouts, of hollow beats on bendirs and tom-toms, a sound both intoxicating and frightening. The sounds meld, the noises mix together, and the medina with its swarming little streets becomes the intimate labyrinth in which the games of commerce and the interminable palavers around boiling tea defy the western norms.

Nevertheless, a voice imposes itself over this tumult--an elf with a thousand faces that falls silent only to resume farther on, disappears, reappears and calls out as many "peek-a-boos!" as there are crackling transistor radios in the entire medina. Thus the voice of Barbara infiltrates gently into the city, and with it, those of Djurdjura, Pink Floyd, Ray Charles, Trenet and Djamel Alam.

Cassettes, such as the small peddlers offer at the price of a metro ticket? Not at all. It is radio--and not ordinary radio. It permits itself to be so bold as to play an Arabic-language record and then comment on it in French, to read an ad in Arabic and then sign off in French. Installed in Morocco since 2 years ago, it has garnered between 5 and 6 million listeners and has taken hold in the cities of northern Morocco. Its name? Medi-1, or Radio Mediterrannee Internationale. An amazing wager, proposed by King Hassan II to the French president of the time, Giscard d'Estaing, and taken up by a pugnacious Corsican, Pierre Casalta, at the head of a team more Moroccan than French.

"I would like a radio station of international character, run by professionals who would read their texts into the microphones themselves," King Hassan II said to the man who had just been assigned from Radio Monte Carlo, to conceive and launch this radio station in which no one really believed. "Banco!" replied Mr Casalta, assured of the sovereign's confidence and total freedom of maneuver.

Medi-1 thus started up in September 1980, using the old Radio Tangiers transmitter and with a Franco-Moroccan structure: 51 percent of the shares belong to Moroccan state enterprises and 49 percent to French interests--more than half of it to SOFIRAD [expansion unknown]. Very few personnel, but with the will to train personnel gradually "on the spot." But in particular, an original "music and news" formula adapted to the slogan "one voice, two languages": permanent bilingualism.

Some would have preferred to cut the broadcasting into French-language segments and Arabic-language segments," explains Pierre Casalta. "We opted for the mixture such as the Moroccans use every day, speaking French and Arabic alternately, borrowing from the former the modern expressions or inventive language sometimes lacking in the latter." A happy marriage, in any case. The two languages are closely linked in the broadcasting, and the broadcasters--all Moroccans--pass from one to the other naturally.

"Without Modesty or Taking Sides"

This same brew is found in the musical programming, born of the encounter of two cultures, the French and the Moroccan, in which the Anglo-Saxon cousin inevitably takes part.

Music, essentially (3,000 albums and no dependence on the record companies which ignore the Maghreb market); several popular broadcasts, such as "Chain of Friendship," or the program devoted the listeners' poems, that bring the station a surprising volume of mail--as much as 7,000 letters per month, some from Algeria, others from throughout Morocco, sometimes recognizable by the ink and paper when a public scribe in a small village of the Haut-Atlas writes some 10 of them, at the request of isolated shephers.

And then news. Wasn't it Medi-1 that was the first in the Maghreb to be able to announce the death of King Khaled of Saudi Arabia, then that of President Sadat, and more recently, that of Bashir Gemayel? And who, if not Medi-1, provided daily coverage of the events in Lebanon, daring to talk, day after day, of the surrender of the Palestinians, the international reactions, the Israelis' advantage, despite the silence or contradictory information put out by the Moroccan public-service radio stations?

"A shock treatment for the population, a breath of fresh air for the listeners cut off from all credible information about external events," the journalists consider. "For the first time," Mr Abdelkader Chabih, in charge of Arabic-language writing for the station and a former journalist with the national daily press assures, "rigorous information, without modesty or taking of sides, appeared in the country. We would deliver the raw facts, with no other ambition than to inform, and without slipping into our talk the inevitable message that the other radio stations, whatever their origin, try to impose on us. No need for commentary or editorializing. These are often only pleonasms. The listener is intelligent. The facts speak for themselves."

A statement just for the visitor? Not only so, even if the 77 employees of Medi-1 obviously try to communicate their enthusiasm at all costs. But the station is there, which illustrates and confirms Mr Chabih's remarks. Three-voice news broadcasts, done by two teams (the Arabic-speaking and the French-speaking); a fast, nervous pace; a professional tone--contrary to the solemn and partisan rivers of news broadcasts from the stations of the RTM (Moroccan Radio and Television), conforming with the national daily press in a hundred ways, and finally, to the great displeasure of the important lobbies in the country.

"It has been necessary to get the listener used to calling everything by its right name again," explains Jean-Robert Cherfils, news official. "Thus the 'mercenaries' of the Polisario Front have become the 'Polisario Front' again; Pretoria's 'racist regime' is called, more soberly, 'the Pretoria regime'; no more systematic use of 'Zionist' preceding the name of Prime Minister Begin, or 'sellout' to describe the regime of Chile." This is relatively audacious, but its fallout has not been long in coming.

A Certain Self-Censorship

"Medi-1? A Zionist propaganda post," some have cried; "a subsidiary of Radio Israel," others have shouted. Among them are the very same persons who, a year ago, curiously modified their language or their coverage of international events. Let Medi-1 mention executions in Iran and the Moslem Brotherhood of Tangiers threatens to "cut down all the journalists one by one." Let it report the encirclement of the PLO leadership in Beirut and the Istiqlal press denounces the "challenge to the Moroccan people." The station's journalists wish to ignore such criticisms, convinced that the recent coverage of the Lebanese conflict rallied many listeners to them.

Are the valiant journalists of Medi-1 fearless and above reproach? And is the sky of the editorial staffs of the purest blue? For audacity, insolence, stone-throwing stop at the gates of Morocco. Curious eyes, yes, but eyes that preferred to see nothing of the events of Casablanca, waiting to know whether those events were going to go beyond the 48-hour threshold; practiced ears, doubtlessly, but ears that prefer not to hear too much disobliging news about their close Algerian or Saudi neighbors. But since you are repeatedly told that Medi-1 is a radio station of an international character!

Certain members of the editorial staff implicitly admit a certain self-censorship, while at the same time rejoicing in the privilege of working on "the freest radio station in the Maghreb." The officials, for their part, consider that they have never had reason to complain of any pressures from Rabat and assert that Medi-1 has never passed in silence over an important event coming under its competence. The notion of "international news" remains to be defined precisely, unless this obligatory prudence about everything that relates to the countries of the Maghreb is the price to be paid for maintenance of this tool--in short, for maintenance of quality.

This is all the more crucial a question today because by increasing its potential listenership considerably, the station also multiplies the stakes. And in the big white house right in the middle of Tangiers that houses the studios and the "Medi-1 family," there is already no question any longer except this change of amplitude (of scope). Some dream of permanent programs or correspondents; others, of advertising strategies. Receipts covered 30 percent of the budget in 1982, and some consider that an international system should make it possible to balance the accounts by 3 years from now.

"Mission accomplished," Pierre Casalta, pleased with the public's reactions, therefore seems to think today. He is especially pleased with the reactions of his team. "There were 14 of us French at the start, and now there are only 7 of us, and that is so much the better. We have got a spirit going, we have trained people in the techniques of radio, and we have transmitted what we know. Medi-1, through the voice of the Moroccans, gives today a credible image of France to the outside."

11267
CSO: 5500/4601

TELEPHONE SERVICES IN LATAKIA PROVINCE EXAMINED

Damascus AL-BA'TH in Arabic 15 Oct 82 p 5

[Article by Zuhayr Jabbur: "What Is the Phone Service Situation in Latakia Province?"]

[Text] Latakia Province continued to use handcranked telephones until 1950 when Posts and Telegraph was tied into the Ministry of Communications. Hence modern communications began to play their role in our society so that now one of the everyday things in our lives is the word "Hello" which we say dozens of times a day. The Latakia directorate now has 883 workers.

Breakdown of the Network

The province has made big jumps in expansion during 1981-1982 because the number of subscribers was 8,500 in 1980 and in less than 2 years has risen to 14,800. The network is broken down into three centers: Latakia includes 2,000 telephone numbers, al-Qardahah 3,000 and Jablah 4,000. In addition the telephone centers link the subdistricts and villages with the main exchanges in the city of Latakia by 26 cables and 25,000 lines between the new and old areas of the networks which have not yet reached the following districts: Qaninas, Da'tur Basnada, Damsarkhu, Hayy al-'Ad'idin, al-Shaykh Dahir and Mar Niqula.

At the beginning of 1983, according to telephone sources, these areas will be provided with the new network and we will complete the city link and the digging work which is being carried out now by the Syrian Networks Company in order to finish the final phases of the work. We hope that the company will not allow the dirt to stay as it is because it hurts the appearance of the city. Before getting to the heart of the matter, we should take a brief look at the directorate which faltered several years ago, each successive set of managers having added new mistakes to old ones and then departed. Therefore, voices and complaints and, at times, even shouts have been heard. In 1981 when the expansion campaign was just starting, Eng Amin Shakhis was appointed director of telephones in Latakia. What has been accomplished so far and has he been able to deal with the accumulated mistakes?

There are currently 37,000 unfilled orders for telephones. Given our available capacities, we can provide 15,000 lines by 1985 in priority order, including departments of the government, official establishments and exceptional requests.

The crisis will continue despite out efforts because the telephone density has begun to rise and will continue with the directorate's efforts. The general organization is making the necessary studies to end the crisis and we can state that all problems will be resolved by 1999.

Outages

After getting acquainted with the status of the directorate and a breakdown of its networks, we should touch upon our local sore points: outages, outages, outages. The word outage is on the lips of every subscriber in the first exchange which comprises, 6,411 main lines and 785 secondary lines and which recorded 896 outages in the month of September.

The second exchange includes 9,132 main and 875 secondary lines and recorded 1,500 outages in the same month. This exchange serves Tuq al-Balad.

The rainy season is not yet at its peak and it is well known that outages hit record numbers during the rainy season. A list of outages reaches the office of the director each day and he reads it to find out what has been taken care of. The director finds that the faulty lines concentrated in the Tuq al-Balad areas running for long distances in the air cause repeated outages because the extension technically should not be more than 200 meters only while the troublesome lines stretch over distances of 1-2 kilometers. Winter outages come from moisture. Other organizations, such as water and electricity (qasiun) do a lot of digging. In summer, the dryness keeps the cables from getting wet, keeping in mind that half the network is insulated by cardboard. The above organizations do not notify the directorate before digging and the faults are discovered in the winter after the digging has been filled in, thus forcing us to redo the digging to effect repairs.

Internal faults take no more than 12 hours to repair, external aerial line faults will take 48 hours and underground cable outages could take more than a week at times, subject to discovery of the source of the outage, particularly in the heart of the eastern city, the villages of Sanjawan and Saqubin, and Maktab al-Dur and the surrounding area.

941-942-943

You pick up the phone and dial one of the numbers:

"Good Morning:

"Yes." (rudely)

"I want to place a call to Damascus."

"Damascus is out of order."

You hang up and try again.

"There will be a 7-hour wait."

You are disappointed and feel that you are unlucky in your dealing with the telephone company. You try the automatic dialing, the lines get crossed and you get a busy signal which you find useless. Does this happen?

The question was posed to people in Latakia Province and the answer was yes. I will pass on the causes which you may find convincing as was done with me. The pressure on the communications lines among the provinces is not necessary and prolonged conversations cause backlogs. Each of us must be as brief as possible. The most important thing is the attitude of the workers because they play a fundamental role in the operation. Who are they?

Exchange Workers

They are primarily people like us with their own private and public circumstances who are subject to psychological factors and illness and who work by means of [apparent omission].

You depend on their verbal ability. Every day they have to respond to thousands of conversations incoming and outgoing. They have to deal with diverse personalities and psychologies. They have their own quarrels: The Damascus operator wants the line, the Tartus operator has it, the Latakia operator gets upset and often we hear, "Damascus...Hello...."

And so it goes in the jargon of the profession. The other end does not answer and the whirlpool goes on. A person leaves with the sound of jangling telephone bells and the words in his head. This is in addition to the modest pay, nonexistent production incentives and difficult working conditions.

Coaxial Cable

It runs between Latakia and Damascus and is prey to outages from vandalism, farm plowing, heavy truck traffic, etc. Its function is to link the provinces all along its length.

Peak business in automatic dialing is from 0900 to 1500 and from 1700 to 2000 hours.

The dialing system operates under tremendous pressure which can be lessened after the coaxial cable lines are increased by the end of 1983.

The dialing system, as any operation, is subject to outages at times. It should be mentioned that the project has not been handed over once and for all because there are some technical shortfalls which the contracting company has not yet remedied.

The international line can get any number of most Arab countries, Europe and American because of the paucity of communications with those countries. [as published]

In this connection, the directorate has dedicated a number (23055) to receive complaints about external calls.

Information

The status of external communications may have convinced you after learning the primary causes. This is what prompts us to ask the usual question: What next?

There are more practical steps which will be taken in the future, including increased coaxial cable lines, as the director stated.

Information is a very important service. It is the number "95" which, in fact, is 12 lines to receive and answer calls.

This service has gone down hill recently. After a lengthy wait 95 may or may not answer and often gives you wrong or very old information.

In recent times, lines have been replaced and new numbers provided and this has put the information function in an unstable state, resulting in poor information. To remedy this situation the local telephone directory is now under preparation.

Information can play its service role, particularly after the lines situation stabilizes. We should add a short observation about the publication of names in the directory: There are those people, about 15 percent, who do not want this done.

Paying Bills

Receipts, excess conversations, automatic answering tapes and external conversations are all forwarded to the computer department in Damascus to be redistributed in the manner used in all provinces.

The organization is now laying out a plan to catch past due bills wherein the amounts due must be paid within 3 months at the most after the end of the billing cycle.

People can notify the directorate about errors in bills, from a dubious number to external calls, through an official protext which will cause the bill to be checked.

A reference has to be made to the 50 percent rise in prices for local calls. Excess charges have dropped from 1,000 to 800 and the average international call now runs 25 Syrian pounds per minute. This increase started at the beginning of 1981. The province is currently paying the third cycle of that year. People must confirm information before protesting.

Rotation

Every 5 hours, the exchange and information workers rotate and this can interfere with operations at times since no one may answer a caller for a long time. Also, some requested numbers may be ignored or an external call may end and there is no one available to disconnect the line for the subscriber. In fact, all these petty things fall within the framework of work and they can be remedied by proper supervision. Again, we should appreciate the conditions of the workers. Sometimes the delay may be because of communications or a case of illness about which management was not notified or done on purpose to have a cup of tea or to talk with a colleague or to sing along with a song. Such cases have plagued management without exception: everyone who doesn't bother to answer or those who have left work without waiting for their replacement.

Rural Services

They comprise radio and landine and compatible communications, all linked with major centers in Latakia, Jablah and al-Qardahah. The rural areas have seen a qualitative jump during past years, the number of subscribers having increased by 300 percent over the 1980 figure.

Most subdistricts are linked with the centers and manually operated lines have been replaced. A subscriber can ask for a number without 941.

Rural projects are part of the 5-year plan, covering many villages. The coming year will see a great improvement.

Telegraph

The directorate asks people who want access to a telex to get in touch with it to take care of the request because the capabilities are available since the new exchange has been installed and put into service.

Difficulties

As is the case with all quarters which deal with large masses of people, the telephone sector has its own special and general problems.

The priority of calls may pose a problem. The citizen must recognize fully that he has his rights but priorities play an important role. Calls involving the public situation, whether economic, industrial, commercial, agricultural, etc., are given attention and cannot be compared with routine calls. Even repair and maintenance operations are subject to these conditions and among numbers requiring repair, expeditious treatment must be given to putting numbers involving the public interest into operation. The citizen must cooperate with the directorate to improve service and other organizations of the province must do as much as possible to notify the directorate at once of any actions involving the cables.

Some quarters try to conceal the location of the cut or damage to the cable to avoid bearing the responsibility.

According to my information, the governor is constantly stressing this work and expressing concern with the objective of having quarters involved in digging and earthwork cooperate.

Will those quarters respect the wishes of the highest responsible authority in the province?

It is an ethical issue determined by the quality of management and how disciplined it is and how much it respects itself first of all.

If (qasiun) fills in dirt and then the electricity authority does some digging and then the municipality fills it in and then the water authority does some digging, this constitutes a problem that must be stopped in some manner.

Internally, the directorate faces the problem of a shortage of technical expertise and staff and an imbalance between the amount of work and the nature of the expansion.

The cause of this is that people do not take jobs because of low pay and the lack of production incentives.

The directorate has only four pickup trucks for the maintenance workshops, a very small number if compared with the daily workload of the repair and maintenance workshops.

Communications services are constantly improving. Through the interest of the political leadership in the country, this sort of service has been given major importance because it plays a social and economic role. Linking the country internationally and the completion of the automatic dialing project internally can perhaps serve to confirm that.

Since plans are underway and capabilities are being devoted to accomplishing the improvement work, we should hold off a bit because the projects which have been proposed will put our country in first place in its communications methods of all international and local types.

8389
CSO: 5500/4505

LTC OFFICIAL NOTES PROBLEMS FACING CORPORATION

Monrovia NEW LIBERIAN in English 26 Oct 82 p 8

[Article by Rufus M. Darpoh]

[Text] Mr. Gargard stated that it was about time LTC and LEC (Liberia Electricity Corporation) got together and worked out a mutual agreement on the usage of telephone and electric poles.

He said that most of the high poles are owned by LEC and if an agreement was worked out, distances between telephone lines and electric wires would be maintained for the convenience of both agencies.

RURAL AREAS

Touching on telephone service in rural areas, Mr. Gargard noted that the major problem is lack of commercial power in those areas: He said there should be at least two generators at most sites so that if one is in operation, the other would serve as a standby unit.

He noted, however, that cost in diesel fuel consumption is heavy. He said sites most affected by good telephone service are Cape Palmas, Greenville, Voinjama, Zorzor, and Gbarnga.

Another problem, Mr. Gargard cited, is that at the time the outstations were being planned, the fast growth rate of the areas were not taken into account, and now the populations are growing faster than anticipated.

For this reason, when many people are using the trunk lines, it is difficult to get good service from the rural areas. When this happens, people think there is a breakdown in the telephone system, Mr. Gargard explained.

To solve this problem, LTC, he said, has submitted a program to the Minister of Post and Telecommunications to increase communication service in the rural areas. If the program is accepted and implemented, the telephone service would be enhanced, Mr. Gargard asserted.

10-YEAR PLAN

Meanwhile, there is an overall ten-year plan to improve telephone, cable, transmission lines, switching centers, and international exchanges which will complement PANAFTEL (Pan-African Telecommunications) network.

The LTC Deputy Managing Director for Operations revealed that the plan which will cost $26 million to implement, had been submitted to the Ministry of Planning for consideration.

He stated with pride that there are now qualified engineers at LTC to solve the problem. "What is needed is money and support, especially from subscribers who have not been paying their bills," he added.

With regard to satellite, Mr. Gargard said it was put into operation in 1976 with 36 non-standard channels. Today, it is Standard B with SCPC (Single Channel Per Carrier) equipment having 60 channels.

He said this makes it possible for LTC to communicate with all parts of the world by telephone. He added that it was because of this that LTC was able to telecast some important events connected with Head of State Doe's recent visit to the United States.

LTC indeed has come a long way. With the necessary support from the government and subscribers, it can improve the telephone system in the country. As Mr. Gargard noted, there are now qualified engineers to handle the job.

CSO: 5500/42

BRIEFS

MANUAL TELEPHONE EXCHANGES INSTALLED--Two manual telephone exchanges valued at 8,215,000/- have been installed at Peramiho and Tunduru areas in Ruvuma region. A statement issued by the Tanzania Posts and Telecommunications Corporation said that the Tunduru exchange valued at 7,925,000/- is connected to Songea by a 60 channel Ultra-High-Frequency (UHF) radio system. The exchange already has 120 subscribers and provides 12 hour service daily from 8.00 am to 8.00 pm including public holidays. The Peramiho exchange has Very High Frequency (VHF) radio system with the capacity of 80 lines, 35 of which are already working. The exchange is valued at 290,000/-. The hours of service for the exchange are from 7.30 am to 12.30 noon and 2.00 pm to 4.30 pm from Monday to Friday. [Text] [Dar es Salaam DAILY NEWS in English 30 Oct 82 p 3]

CSO: 5500/44

BRIEFS

NEW TELEVISION TRANSMITTER--Kinshasa, 15 Nov (AZAP)--On Monday, at the Binza Transmitting Center, state commissioner for information, culture and arts citizen Kande Dzambulate commissioned the new 10 kw television transmitter of the Zairian Radio and Television Corporation, donated by the French Government, announced the Voice of Zaire in its new bulletin at 1900. [Excerpt] [AB161247 Kinshasa AZAP in French 1150 GMT 15 Nov 82]

CSO: 5500/45

NORDIC MOBILE TELEPHONE SYSTEM GAINING SUBSCRIBERS

Oslo AFTENPOSTEN in Norwegian 27 Oct 82 p 10

[Article by Erik Bjørnskau: "Nordic Mobile Telephone Prepares for 90's"]

[Text] When Nordic Mobile Telephone (NMT) was introduced in Norway a year ago specialists agreed that now we had obtained the most advanced equipment in the world for mobile telephony. But in spite of record interest it is possible all the same to record--as for all technical innovations--individual childhood illnesses.

NMT has today more than 9000 subscribers; rapid development in only a year and a quadrupling since the new year. Nordic Mobile Telephone was developed by the Telecommunications Service in cooperation with the telecommunications administrations in Sweden, Denmark and Finland. It is a totally digitalized system which makes it possible not only to call from its mobile set but to call directly without going through an exchange, and to over 100 countries worldwide. In addition, a telephone subscriber can call a mobile telephone within the Scandinavian area of coverage without knowing where it is located, something the traditional VHF and UHF systems cannot offer. As of this summer utilization capacities have been expanded mutually for subscribers in the four Scandinavian countries.

The earlier independent UHF and VHF mobile mobile telephonics which represent "classical" mobile telephony, are therefore on the way out and the Telecommunications Service counts on their being liquidated during the 80's. Now there are a total of 40,000 mobile telephone subscribers in Norway, a very large number, relatively speaking, on the world scale, Information Chief Christian Bugge Hjorth at the Telecommunications Directorate reports to AFTENPOSTEN.

But in spite of the fact that the Telecommunications Service has now launched the newest of the new, a Scandinavian work group is already in the process of dealing with the possibilities, prerequisites and need for a next-generation radio communications system for mobile services, which will be able to supplement the NMT beginning in the 90's, Bugge Hjort is able to relate.

When individual subscribers can point to problems with the NMT it is not because the electronics have not been mastered. The system is in principle a radio service but the new thing is that it is completely automatic, says Telecommunications Directorate First Adviser Ivar Sliper, and even the signals in the NMT system are dependent on a free line to a so-called base station which relays them further.

The Telecommunications Service has set up these base stations at a number of places in east Norway, far more than for VHF and UHF systems, and gradually along the southern coast and in west Norway. The service is new and more base stations will be set up gradually as experience and information regarding the traffic basis are obtained, Sliper says. Reports from customers regarding difficulties in individual areas will also be very useful for further development of the system. The system will be expanded in central Norway in 1984 and in north Norway in 1985.

Information Chief Bugge Hjorth is able to relate that the Telecommunications Service now wishes with a deliberate price policy to orient users toward the new NMT system, since there has been increasing difficulty with getting through with traditional mobile telephone systems. With the NMT there are also opportunities for special services such as screening, transferring and short number selection. The computer automatically locates the mobile customer when he moves to a new area of coverage.

8985
CSO: 5500/2529

PROBLEMS OF EXPORT OF TV PROGRAMS TO CANADA DISCUSSED

Paris LE MONDE in French 23 Oct 82 p 27

[Article by Annick Cojean: "T.V.F.Q.99: Patchwork or Voice of France?"]

[Text] From our special correspondent--Montreal--Strengthen cultural cooperation between France and Canada, expand the French language audiovisual range, and introduce more reciprocity in exchanges between the two countries: these are the major topics of the meetings held this week in Paris, between the Canadian minister of communications, Francis Fox, his French counterpart, Georges Fillioud, the minister of culture, Jack Lang, and several high executives in the audiovisual field.

On Wednesday, 20 October, after having presided, with Mr Fillioud, at the launching of a televised series, "Indian Legends," produced by the French-Canadian screen writer Daniel Bertolino, a program that will soon be broadcast on Antenne 2, Mr Fox expressed the hope that the experience of the French language television network T.V.F.Q.99, which is presently limited to the Quebec Province, will be extended to the entire Canadian territory.

Created in 1979 by a intergovernmental cultural agreement, revised by the administration of Pierre Mauroy (in 1982) to include a reciprocity clause compelling the French networks to buy a minimum of 100 hours of Canadian television productions each year, T.V.F.Q.99 is a French program distributed by cable and supplied exclusively with a selection of broadcasts originating from the three French networks. It is an unusual channel, less controversial today in its basic principle than in its means and content.

To land in Montreal, rush to the TV set of a hotel equipped with cable, and feverishly punch the buttons of the remote control, is a normal reflex on the North American continent. To juggle among the 20 channels and lightly go from Radio-Canada to Telemetropole, from Radio-Quebec to the public TV channel or to CBS-Burlington, and then to stop at T.V.F.Q.99, the French channel, is an amusing game for a European. But to find, from Montreal to Lac Sain-Jean, and from Gaspesie to the Laurentides the rowdiness of "The Right to Answer," the mugging of Jacques Martin, and the news program FR 3-Languedoc-Roussilon, is definitely amazing and even surrealistic.

Each week, several dozens of videotapes leave Roissy for to Montreal, where, the Company for Editing and Recoding TE (SETTE), converts the programs (the Canadian transmission system being different from the French one) and then sends them to cable distributors. Since at least 900,000 homes are equipped with cable, about 2.5 million people receive T.V.F.Q.99, according to a study conducted in 1981. Half of them stated that they view at least three hours per week: proof that there is indeed an audience with expectations to be met.

And yet, there has been no lack of criticism about this operation, started jointly on 16 September 1979 by the Quebec prime-minister, Rene Levesque, and by the French minister of justice, Alain Peyrefitte. Artists and intellectuals were wary of what they began to see as "cultural colonialism," while the Union of Artists denounced the "disloyal" competition of French television, and the "cowardice" of the Quebec government for being incapable of fighting the massive penetration of the American networks without help.

Today, the opponents have quieted down. T.V.F.Q.99 is now a part of life; it has even drawn some of the audience from other media by providing viewers with programs they look forward to: "Apostrophes," scheduled one month after its French showing, whose advance announcements at bookstores are often the occasion for special displays; news magazines; medical broadcasts; as well as "Screen Files," "Theater Tonight," or "School for Fans," whose success has engendered the creation of its equivalent on a Montreal private network.

The programming as a whole nevertheless still disappoints a large part of its potential public, saturated with standard fare and tired of hearing each evening the regional weather report for the previous two days! Inadaptation? "Imperfections," answers Jean Rouilly, deputy director for international and commercial affairs at Antenne 2, explaining that the lack of choice in the proposed programs--despite his efforts to diversify them--and the sometimes disastruous delay in their broadcast, are the result of three major obstacles.

Priority of Large Networks

First, there is the problem of authors' rights, which forbid the transfer of co-produced programs without agreement from the partners; they also exclude most works of fiction, since authors are not eager to receive royalties that are definitely lower than those they can logically expect from the other large networks (an hour of fiction is paid about 36,000 F on Radio-Canada, and 2500 F on T.V.F.Q.99). The authors therefore ask that priority in the sale of their products be given to Radio-Canada and Radio-Quebec, and expect them to be programmed on T.V.F.Q.99 only when all possibilities for a "better" outlet have been exhausted. This is an attitude that has given the French channel the reputation of "the network of unsalable goods."

However, the French networks are saying that "what matters is to offer maximum exposure, and therefore the largest possible audience, to any television production, which is often sentenced to oblivion. The authors should not forget the role that T.V.F.Q.99 can play as ambassador of French culture, and the large benefits that can eventually be expected in many areas such as books, records, and movies."

The doubled sales of French productions at Radio-Canada and Radio-Quebec, observed in the first year, has raised some hopes. Is it chance, heightened awareness of France's products, or the performance of the network's sales services?

Associated with the nature--originality--of T.V.F.Q.99 and the causes of the time delays for broadcasts, are technical problems. The broadcasts are selected in France by each of the networks (as recommended by Quebec); they then have to be copied, copyright releases have to be checked, the tapes have to be shipped, and upon arrival in Quebec, they have to be recoded, programming has to be formulated, announcements have to be made in the Quebec press, and so on. All these operations involve a minimum delay of three weeks, and more likely two months, making it futile--not to say ridiculous--to attempt broadcasts that cover current events.

Quantity or Quality?

Lastly, SETTE encounters serious supply difficulties in satisfying the demands of ambitious programming (2500 hours per year, or seven and one-half hours of original daily programs rebroadcast one week later at a different time). In fact, the exhaustion of the French networks has recently led them to call upon the National Audiovisual Institute, keeper of the television archives. A total of 2500 hours is a lot, too much probably, as the networks unanimously deplore. "We have bet too heavily on quantity, and not enough on quality," states Roland Nguyen, head of FR 3's commercial services. "We will never beat the Americans at their own game. Why not counter the tides of images that flow from the United States, with a more restrained, but more varied and higher quality programming?"

"2500 hours are not only difficult to supply, but also cumbersome to manage," adds Marie-Christine Grollemund, head of TF 1's commercial service. "The total amount of 1.5 million Canadian dollars that we receive equally from the French and Canadian governments, not only allows us no profits, but also ties our hands with respect to the authors and actors who have the unpleasant feeling of seeing their work sold at rummage prices!" The essentially cultural nature of the Franco-Quebec agreement does in fact upset the rules that usually prevail in purchases and sales abroad.

On the other hand, the Quebec private companies that have joined SETTE, have profited from the massive introduction of French programs, and have thus increased the number of their subscribers. "Is it not unfair," observes a financial specialist at TF 1, "that the French networks, which must also show a commercial profit, are subsidizing the Quebec private companies?"

"The system is imperfect," admits Jacques Thibau, director general for cultural relations at the Ministry of Foreign Relations. "But no one would think of questioning the principle of this cultural cooperation, which Canada in fact would like to see expanded. What is important today is not so much the programs that we send on the Quebec cable, as the pictures the Canadians will send us from now on. The introduction of the notion of reciprocity is fundamental. It discloses both a new sensitivity and new priorities in cultural cooperation."

This should satisfy the governments of Quebec and Ottawa, who are anxious to finally see a concrete fulfillment of this idea of reciprocity.

And it should also create a few difficulties for those responsible for network programming and production units. To be sure, no one is questioning the new clause, but the means for its application are far from having been defined. Various agreements had earlier been reached on both sides. Guy Thomas, former president of FR 3 went to Quebec in person during the year; TF 1 points out the purchase of serials (televised version of Plouffe); and Antenne 2 plans several large productions (Louisiana, The Blood of Others, The Tomcat, and so on).

"What better system than co-production to illustrate this notion of reciprocity," asks Jean Rouilly, "than to work together on a project, complete it jointly, and adapt it for our viewers."

While reciprocity conceived within the specific (symbolic?) framework of the "Canadian hundred hours" has not yet been really studied in France, it has been enthusiastically received by the Ottawa authorities. It is after having mentioned this principle that Mr Fox announced the project to expand T.V.F.Q.99 not only in New Brunswick or Ontario as planned, but in the entire Canadian territory as well. With its available satellite relay and a cable network that services 60 percent of the households, Canada already has the necessary infrastructure.

This is the first time, it would appear, that a country is exporting its television production as massively and systematically as that. Is it a window open on French culture? And which culture is involved?

11,023
CSO: 5500/2536

PHONE-LINE NET EXPECTED TO BE COMPLETED AROUND COUNTRY BY 1984

Reykjavik MORGUNBLADID in Icelandic 29 Oct 82 p 8

[Article: "Great Increase in Phone Connections With the State and Reykjavik Municipality Computer Center"]

[Text] The number of customers of the State and Reykjavik Municipality Computer Center [SKYRR], who want to be connected with the Center's computer system through telephone lines and maintain so-called out stations, is constantly increasing and is already well over 100 in all. This information appears in the center's latest newsletter.

The newsletter states further that, as an example of the extent of the teleprocessing, these customers call for information or send information about 500,000 times every month.

Places outside Reykjavik which already are connected with SKYRR through telephone lines are Akureyri, Keflavik, Kopavogur and Hafnarfjordur. Soon, telephone lines to the Vestfjords, Snaefellsnes, Akaranes, Borgarnes and to the southeast will be added to the system. At the turn of the year 1983, a phone-line net for sending and receiving will be in place all around the country. This phone-line net will, among other things, reach all State Collecting Offices; the State Vehicle Supervision Office; all tax offices; the offices of the State Real Estate Assessment Board and many other institutions.

Even though teleprocessing has now become an important part in the operations of SKYRR and is increasing rapidly, the greatest amount of the data processing itself still takes place within the walls of the center itself. Various reports, accounts, payroll cards and many other things are calculated and produced at the center in great quantities. As a measuring stick of the extent of the processing in this field, it can be said that the monthly turnout corresponds to 30 million lines of reports and other documents.

9583
CSO: 5500/2531

MINISTER DISCUSSES GOVERNMENT POLICY ON CABLE TELEVISION

Oslo AFTENPOSTEN in Norwegian 28 Oct 82 p 3

[Article by Morten Malmø: "Cable TV 'Free,' Not Monopoly"]

[Text] "In the future cable TV must be made available also to others than the owners of the network. It would not be rational to place several parallel networks in the same district," said Culture Minister Lars Roar Langslet in the Storting [Parliament] yesterday. He thought it natural to consider licensing stipulations which ensure the community opportunities for opening cable transmissions up for others, too, in addition to the owner.

The cabinet minister further made it clear that it is not desirable to have the development of a series of local monopolies, especially not in a situation in which loosening up of the monopoly is a goal which is gaining steadily greater support. As far as licensing stipulations are concerned, Langslet stressed that consideration should be given to whether other parties than the owner should not be guaranteed rights for arranging for transmission--over already existing cable systems, too.

Langslet's move in the Storting yesterday came when he answered a justified question from Tom Thoresen (Labor Party, Østfold). Thoresen wanted to know which guidelines the Culture Ministry is working under in order to ensure that licenses for experiments with local cable TV can be used in a free manner so that ownership rights for cable networks will in reality be decisive for drafting and utilization of the licenses which the ministry has issued.

"Possession of the cable network itself can already in the experimental period result in a real lead," believed Thoresen, and he referred to the Janco cable company which the first time around had its application for a license rejected but which got it in the "second round," because it was not possible for Janco and Stovner-Groruddalen Lokal-TV [Local TV] to reach an agreement regarding sharing the license. The local company had gotten the license, that is, but was dependent on Janco's cable network.

The culture minister stressed that all those who now have gotten permission to engage in experiments do not have a right to extended permission over and beyond the experimental period.

"The cable development which has taken place over the years has been regarded as a technical installation, e.g., for arranging for Swedish television--and has not been evaluated in the broader media policy context. In the future I think everyone will be sorry that we were not far-sighted enough," said Culture Minister Lars Roar Langslet.

8985
CSO: 5500/2529

INTRODUCTION OF ADVANCED-TECHNOLOGY PHONE ANNOUNCED

Oslo AFTENPOSTEN in Norwegian 29 Oct 82 p 18

[Article by Erik Bjørnskau: "Pushbutton Phone: New Customers Get Telephone Set of the 80's"]

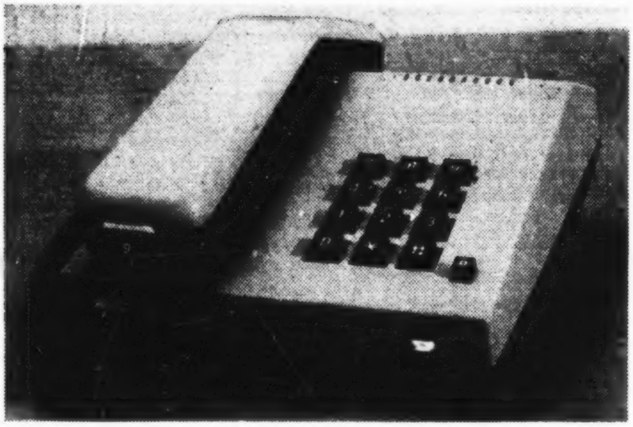
[Text] Things have gradually quieted down somewhat with regard to the Telecommunications Service's new telephone set--the pushbutton phone. After the big sales campaign in the early summer now business is continuing in a more normal manner. But still some time in the future it will be necessary to reckon with individual capacity problems when the set is installed in the telephone system, which is characterized by both older and modern equipment. The expansion of computer-controlled telephone exchanges is, however, taking place continuously in order to be able to offer steadily more customers a better telephone.

Since the pushbutton phone was launched in an experimental project in four cities--Oslo, Drammen, Bergen and Ålesund--today in just the Oslo telephone district about 11,000 to 12,000 customers have the new pushbutton set and now 1500 sets are sold each month, reports Telecommunications Chief Finn Jahren.

Two versions of the pushbutton phone exist. One, the tone dialing model, is an advanced small computer terminal which, when used with a computer-controlled telephone exchange, to begin with can perform a whole lot of new additional services for the customer. They include programmed transfer of incoming calls to another party number, controlled screening, automatic waking or alerting, and programming of so-called short numbers, the ability to simplify long often used numbers to a personal code.

The other model, which is called a decade model, is basically just a more up-to-date version, on the outside, of the tradiational telephone set, but a call is in principle "set up" in a faster manner.

Up to now the Telecommunications Service has offered just the advanced tone dialing model in which signal transmission is based on tones and not on electrical pulses as in other sets and, of course, only to customers whose line is connected to a DMS [computer-controlled] exchange, a so-called 10 C exchange in the Oslo area. These exchanges exist now in Furuset, Fagerborg and Frogner, among other places, where they control sections of customers' lines which belong to these exchanges. Therefore, it is necessary also to have the "right" number in order to be considered.



The pushbutton phone comes in six colors with a replaceable cover and represents a major advance in modern telephony.

As far as the real opportunity for these customers to order the special services named is concerned, being able to guarantee that the computers in the exchange have sufficient capacity has been a problem. At the moment chances exist for some of these services being sold out, but the Telecommunications Service is continuously working on expanding the computer memories in current exchanges so that gradually more will be able to order these services if they wish to.

The decade version was not offered at the same time since earlier this year there was some doubt whether these sets would "harmonize" with the older exchange types. Therefore, in the Oslo telephone district an experimental project using 1000 sets was initiated just to find out whether it was possible to offer customers in all areas the new set. It is possible, and new customers will be able with an additional payment of about 250 kroner to use the pushbutton phone instead of the usual dial model from 1967, regardless of the exchange connection, Telecommunications Chief Jahren is able to state.

At the Telecommunications Directorate Information Chief Christian Bugge Hjorth reports that the intent is to replace all dial sets from before 1967 as quickly as possible. Production of the 1967 model will also be stopped but as a substitute for the pushbutton phone the Telecommunications Service will keep the older model which will be able to be offered in a reconditioned state to customers who still might want a traditional set.

8985
CSO: 5500/2529

TELECOMMUNICATIONS AGENCY CHIEF DISCUSSES ADVANCES, POLICY

Oslo AFTENPOSTEN in Norwegian 29 Oct 82 p 26

[Article by Knut Løvstuhagen: "Let the Telecommunications Service Loose; We Will Compete!"]

[Text] "The Telecommunications Service has been given the responsibility for a development without having complete control of the means." The long-drawn sigh comes from General Director Kjell Holler and holds the feelings he has for the difficult-to-handle and often hindering public control which the service is exposed to. Being part of the State budget imposes strict limitations on the Telecommunications Service's economic elbow room while the ministry and the Storting [Parliament] have a tendency to mingle too much in daily operations. For the Telecommunications Service this is a hindrance in a time when it is becoming more and more obvious that it will encounter competition from private industry in fields where the service up to now has lived a monopoly-protected life. Old walls stand to tumble.

Now, however, it can seem that there is a dawning political determination to loosen up somewhat on the reins which the authorities today hold in a knuckle-whitening grip. In a panel debate recently, in which the Telecommunications Service's situation was the main topic, Communications Minister Inger Koppernaes admitted that there is too much detailed regulation of the service on the part of the ministry and Storting.

"It will be to the society's advantage for there to be a loosening of the ties," the cabinet minister said, who suggested an arrangement whereby the Telecommunications Service can work freely within the framework of responsible goals set by the authorities. However, she did not want to give her direct endorsement to the idea of a telecommunications service corporation, which has been suggested a number of times.

"There are several stations in between to get off at between today's Telecommunications Service and a government corporation. For example, it is possible to imagine the Telecommunications Service, in cooperation with others, establishing corporations in fields which will be especially exposed to competition. An example of this is NSB [Norwegian State Railways] and the establishment of Linjegods [for freight shipping]," said Cabinet Minister Koppernaes. Besides, she alluded to the fact that a committee should be established immediately to study further the service's association with the administration system.

Foreign Giants

In the course of a couple of years the Telecommunications Service should have established two corporations which can offer multinational telecommunications and data transmission companies competition here at home in cable TV and in the industrial communications market. This is the opinion of Research Chief Jan E. Engebretsen at the Telecommunications Service's research institute. The markets in our parts are only in their tender beginning, but will quickly put on speed when the TV satellites are above us and as a result of the persistent fusion of telecommunications and data technology.

Research Chief Engebretsen does not for a moment doubt that Norway is included in the multinational corporations' strategic planning to secure for themselves larger shares of the market and therefore the Telecommunications Service should be prepared the day the offensives begin with full force.

"If not, we will soon found ourselves in a situation in which foreign giants control the market here at home both as far as hardware and software are concerned. This will hinder the flourishing of a Norwegian home industry in this tremendously important field," he believes. In order to stand prepared, therefore the Telecommunications Service should use the next couple of years to place itself in a new and expanded role, especially in connection with industrial communications, but also as far as cable TV is concerned and new services for the household market. The proposed corporations should include, in addition to the Telecommunications Service itself, Norwegian data transmission and telecommunications industries. They will operate as independent entities while another part of the service continues to manage and operate the public telephone system. This administrative agency will in addition--according to Engebretsen's model--be in charge of standardization tasks and type approval of equipment which is to be connected to the public system.

Cable TV

As far as cable TV is concerned--or cable equipment which relays television programs from common antennas or local program sources to several receivers simultaneously--it is the Telecommunications Service's expressed goal to be included in the competition for this market. As General Director Kjell Holler says, "We are going to step up our action in this field. The day satellite signals with TV programs from large sections of Europe descend over our heads the need for cable TV will come with full weight over the whole country. Then the Telecommunications Service will be included, both in terms of hardware and marketwise, in the competition with private suppliers. However, the service will let the software side be."

While the Telecommunications Service's role in cable TV until recently has been limited to administration of regulations for this equipment, it is now engaged in experimental development in a number of places. This includes in Skien, in Trondheim and at Jevnaker. Other current tasks for the Telecommunications Service are establishment of a trunk network for joining together local cable systems and establishment of ground stations to receive and broadcast satellite signals.

Pushbutton Telephone, Telefax

The last couple of years have been a hectic time for the Telecommunications Service. Over the course of last year the new "Tastafon" pushbutton set was introduced to users as the "Telephone of the 80's." Connected to computer-controlled telephone exchanges, the pushbutton telephone offers a number of new services and the Telecommunications Service aims gradually to develop more advanced versions of the set. The Telefax service was also introduced last year--a system for transmission of written information and documentation over the telephone system. In addition, Telefax is the first service which the Telecommunications Service is offering on the market in competition with private suppliers. With the equipment it is possible to transmit an A 4 page in three minutes with today's models and one of these days a digital Telefax set is coming with a transmission speed of about one minute.

The Scandinavian Datex data transmission network was opened in 1981 and will be marketed by the Telecommunications Service as the primary data transmission offer for the 1980's. "Fonoteleks" also arrived, a service which makes it possible to send and receive Telex messages without having your own Telex equipment. Last year also saw the start of the Scandinavian automatic mobile telephone, which is in operation today over all of southern Norway. The system will be completely developed over all of Scandinavia in 1985. A supplement to the Scandinavian mobile telephone can come around 1990, making it possible to transmit written messages and data traffic in addition to conversations.

Ship Communications

Of the Telecommunications Service's big events for this year it is possible to mention the opening of the world's first coastal ground station for totally automatic satellite communications to and from ships. The station is at Eik in Rogaland. While the Eik station today covers the Atlantic Ocean region, in a few months the antenna will be turned around to communicate via a satellite over the Indian Ocean. A cooperation agreement has been entered into with Great Britain which will cover the Atlantic Ocean and with Singapore which will cover the Pacific Ocean, so that before long Scandinavian shipping will be ensured global satellite coverage.

In June NRK's [Norwegian Broadcasting System's] new broadcasting equipment for short and medium waves was put into service at Kvitsøy in Rogaland, the largest broadcasting installation in the Telecommunications Service's history. When the Kvitsøy transmitter is put into service permanently over the new year it will considerably improve the opportunities for Norwegians abroad to listen to the "Voice of Norway."

Digitalization

Let us let the summing of recent events end with this, although a lot more could be mentioned. Now the Telecommunications Service is confronting a new epoch--a time characterized by the rapid introduction of computers into telecommunications technology. For example, in the years to come the telephone system here at home will be digitalized and recently a request was made for bids for digital telephone exchanges with a total of 500,000 automatic numbers. For the first time bids for heavy telephone equipment will be obtained internationally and a reply is expected from six firms before the end of the year. They include the traditional

Telecommunications Service suppliers Elektrisk Bureau [Electric Bureau] and Standard Telefon og Kabelfabrik [Standard Telephone and Cable Factory], as well as Philips (Netherlands), Northern Telecom (Canada), Nippon Electric Co. (Japan) and CIT-Alcatel (France).

It is the government which decided that bids for the digital telephone exchanges are to be obtained internationally and the decision has aroused protests in a number of quarters, not least among the traditional suppliers, who fear a strong decline in the telecommunications industry here at home if a foreign company gets the order. However, it is the government's view that if Elektrisk Bureau and Standard Telefon og Kabelfabrik put their hearts into it and get full support from their foreign parent companies they should--with their extensive local knowledge and market--be in a good situation in the competition. One of them should be able to get the order. The same view has been unofficially expressed by some people in the Telecommunications Service: If neither EB nor STK manage to land this order it will be a confirmation that it was right to go out internationally, it is being said.

It is last of all the Storting which is to decide which of the six firms is to get the order for the digital equipment for further development of the telephone system here at home on the basis of a recommendation from the Telecommunications Service which is to be ready before 1 August of next year. Authorization to order the equipment is expected by next fall.

It is with great suspense that the Telecommunications Service is looking foward to the Storting's handling of this matter, for the outcome is very unclear. There is no potential majority in the Storting either for or against ordering abroad. What some in the service fear can happen is that a foreign firm will come with the best bid but that it will be passed over by the Storting in favor of a Norwegian bid "for employment reasons." Then the international telecommunications industry will put a big question mark beside the Telecommunications Service's objective in going out and asking for bids and such a reaction is what is least of all desired. Such a decision will seem especially incomprehensible when it is clear that both EB and STK will have to reduce their staff at the telephone exchange end regardless of the outcome of the current matter. It is also a condition on the part of the authorities that any foreign firm which happens to get the contract will have to commit itself to building up operations here at home, which will provide at least as much employment as if one of the traditional Telecommunications Service suppliers should get it. Any foreign firm will also have to build up extensive system competence in Norway, so that the Telecommunications Service has expertise easily available.

Postfax

The years to come will also see an expanded area of competition--perhaps a merger--between the Telecommunications Service and the Postal Service. Already today there is an example of fusion of the two services' previously so distinct services, i.e., Postfax. This is a public telephone copying service which the Postal Service and Telecommunications Service have established together. In a few minutes it is possible to transmit documents, letters and drawings over the telephone system from a post office or a telephone office which has Telex equipment. The receiver can himself pick up the message or it can be sent as express mail from the receiving station. The so-called tele-word-processing service which is in the process of introduction by the Telecommunications Service will make it possible to write out a document on a word processor and transmit the document over the Telecommunications Service's lines to another word processor. Another competitor for the Postal Service. When Teledata arrives, users will be able to access information in central data bases by means of a telephone and TV set and have the information presented on the screen at home or at the office.

According to Communications Minister Inger Koppernaes it is possible to count on rapid technical development in the telecommunications sector which will be able to influence the Postal Service's offering of services and which to a great extent will be able to change competition conditions for the traditional postal services.

The Telecommunications Service and Postal Service are thus cooperating on the Postfax service. Together the two services see opportunities for implementing an electronic postal service. Progress is rushing forth to such an extent that it is impossible to disregard the fact that with time we will see the two services merge into a common institution such as there are many examples of abroad.

8985
CSO: 5500/2529

END

JPRS 82458

14 December 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 252

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals ~~and books, but~~ also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 82458

14 December 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 252

CONTENTS

ASIA

BANGLADESH

UN Delegate Urges Free Flow of Information
(THE BANGLADESH OBSERVER, 4 Nov 82) 1

Information Minister Inaugurates Broadcasters' Course
(THE BANGLADESH TIMES, 2 Nov 82) 2

INDIA

Results of Inquiry on Insat-1A Failure Told
(THE HINDU, 11 Nov 82) 4

Bombay Telephone Improvement Plans Told
(THE TIMES OF INDIA, 13 Nov 82) 6

LATIN AMERICA

BRAZIL

Briefs

Plans for 1985 Satellite 7

NICARAGUA

Work of 'ANN' News Agency Described
(EL NUEVO DIARIO, 17 Oct 82) 8

NEAR EAST AND NORTH AFRICA

SYRIA

Television, Telephone Industry Said To Be Thriving
(Naji As'ad; TISHRIN, 26 Oct 82) 12

SUB-SAHARAN AFRICA

CONGO

Color Television Studio Planned
(WEST AFRICA, 15 Nov 82) 19

KENYA

Swede Says Kenya May Install Computer Exchange
(THE NAIROBI TIMES, 2 Nov 82) 20

WEST EUROPE

FEDERAL REPUBLIC OF GERMANY

Briefs

Intelsat V Reference Installations 21

FRANCE

High Technology Electronics Firms Give 1981, 1982 Results
(Colette Menguy; LES ECHOS, 29 Sep 82) 22

Ways To Use Existing Cables for New Telecommunications Services
(Philippe Chauvet; LE MONDE, 17-18 Oct 82) 29

World Data Processing Center To Be Managed by PTT
(LE MONDE, 29 Oct 82) 32

Lille To Experiment With Fiber Optical Links
(Georges Sueur; LE MONDE, 20 Oct 82) 33

Briefs

Thomson-CSF in Iraq 35

SWEDEN

Briefs

Exchanges From Finnish Firm 36

UN DELEGATE URGES FREE FLOW OF INFORMATION

Dhaka THE BANGLADESH OBSERVER in English 4 Nov 82 pp 1, 12

[Text] New York, Nov 3--Bangladesh has emphasised at the United Nations the close relationship between the devlopment proress and free and balanced flow of information on a global basis reports BSS.

Mr. Fakhruddin Ahmed High Commissioner to the United Kingdom and a member of Bangladesh delegation to the 37th session of the UNGA told the Special Political Committee on Information yesterday that mutual flow of information among nations facilitated international dialogue and understanding which were of crucial importance to the promotion of international cooperation. The climate of international relations and degree of mutual trust among states depend greatly on the extent of free and balanced dissimination of information he added.

Ambassador Fakhruddin reiterated Bangladesh's conviction that establishment of a new international information and communication order was a part and parcel of the efforts by the international community to establish the new international economic order aimed at bridging the gap between the developed countries of the North and the developing countries of the South. With our commitment to the freedom and free flow of information, Bangladesh was actively involved in various international organisations and forums to encourage international cooperation in the field of information.

As a member of the United Nations Committee on Information and Inter-governmental Council of International Programme for Development of Communication Bangladesh has been trying to promote understanding through creation of awareness of the genuine and legitimate concerns of all nations he said and emphasised that sincere efforts of all concerned should be directed towards elimination of existing imbalances in the global flow of information and thereby change the dependent status of developing countries in that area.

CSO: 5500/7038

INFORMATION MINISTER INAUGURATES BROADCASTERS' COURSE

Dhaka THE BANGLADESH TIMES in English 2 Nov 82 pp 1, 8

[Text] Syed Najmuddin Hashim, Minister for Information and Broadcasting, on Monday directed the National Broadcasting Academy to prepare a handbook of standard pronunciation for broadcasters to help radio and television play their due role in ensuring a definite standard of the Bangladesh language.

The Minister was inaugurating a two-month regular course on radio programmes for the Programme Producers of Radio Bangladesh at the National Broadcasting Academy. Twelve officers of Radio Bangladesh were attending the course.

The Minister said that since 'Bangla was our state language, it should play its proper role in the national life. For this it must have a definite standard and radio and television have a due role in this regard.

Presided over by the Information Secretary Mr A. B. M. Ghulam Mostafa, the function was addressed, among others, by the Director-General of the academy Mr Jamil Choudhury, Director-General of Radio Bangladesh, Mr Nuruddin Al-Masud and Mr Wes Wier, a foreign expert on course programme.

The Information Minister said that electronic media has a special role in project support communication for national socio-economic development. Keeping this in mind Bangladesh has succeeded in developing a powerful infrastructure for radio and television which now respectively covers 100 per cent and 90 per cent of the country.

Mr Najmuddin Hashim further said that Bangladesh with one language has a population 80 per cent of whom were still uneducated. Under the circumstances despite continuous efforts to develop low-cost print media it was unable to play its proper role in national development and education.

He said that the radio and television would have to play a significant role in promoting national awareness, education and development as well as a source of entertainment.

The Minister pointed out that the establishment of the Broadcasting Academy was a step aimed at making skilled producers, technicians and engineers. He noted with satisfaction that since its establishment, the National Broadcasting

Academy has organised 34 modular course and imparted training to 362 radio and television personnel during the last two years.

The Minister expressed the optimism that the participants of the course would help prepare improved programmes keeping in mind the national requirements to inspire listeners in development education and national reconstructive activities.

CSO: 5500/7037

RESULTS OF INQUIRY ON INSAT-1A FAILURE TOLD

Madras THE HINDU in English 11 Nov 82 p 6

[Text]

NEW DELHI, Nov. 10.

Indian national satellite (Insat-1B) with a number of modifications made in the light of failure of Insat-1A, is being prepared for thermo vacuum testing at Ford Aerospace's facility in Palo Alto. Additional tests have been planned to prove proper functioning of the modified deployment mechanisms under zero gravity conditions.

According to the Space Department, the most significant modification is the incorporation within the satellite of an automatic switch to omni-directional telemetry in the event of loss of earth pointing. The propellent isolation valve control circuitry has been modified to eliminate the possibility of unexpected valve status transfers.

Minor design modifications on solar sail boom assembly and antenna deployment and tie-down arrangements have also been made. The boom is a long arm which supports the solar sail. The boom unfolds itself when the satellite is in orbit. All deficiencies in the ground control software and contigency procedures are being removed and corrected.

A modification is also being made to the seperation interface between the spacecraft and the fitting which attaches it to the payload assist module to strengthen the interface to accommodate the slightly higher space shuttle launch loads than those previously anticipated.

Basic design sound: The review committee appointed to enquire into the causes leading to the loss of Insat-1A, has found that the basic design of the satellite was sound and its loss was due to a complex interplay of relatively minor spacecraft deficiencies and unforeseen events, each of which, under normal circumstances, was extremely unlikely to cause a catastrophe.

The spacecraft having undeployed solar sail, entered an eclipse season from August 31. The ground controller prepared for the eclipse operations a few days earlier. However, on September 4 some deficiencies in ground control software, lacunae in contingency operations procedures and unexpected on board anomalies cause events to cascade in about one hour and 16 minutes culminating in the spacecraft being shut down.

Earlier, during the satellite's orbit raising sequence, the solar sail boom failed to deploy. The non-deployment of the boom and the attached "sail" necessitated routine compensation offset solar torque, solely through the spacecraft's attitude control system.

On September 4, a modest yaw build-up, which occurred on the spacecraft, was being slowly removed by the spacecraft's autonomous control system. "Yaw" is rotary motion about a line between the satellite and the centre of the earth.

Moon's intrusion ignored: The computer programme on the ground failed to predict the intrusion of the bright full moon, after the eclipse interval following the expected sun-intrusion, within the field of view of the spacecraft's earth sensor. This failure was due to an inadequate data base which did not take into account the yaw build-up on the spacecraft due to the undeployed solar boom/sail.

The moon intrusion into the earth sensor, coupled with continuation of "north scan" inhibit, commanded earlier to meet sun-interference situation beyond the predicted period, resulted in the inhibition of the remaining active scan of the infrared earth sensor. This resulted in a lack of reference for the attitude control system and a subsequent drift of the satellite's attitude with the loss of "earth lock."

Emergency action: Ground controllers initiated emergency procedures immediately. These included a change of spacecraft narrow beam telemetry, employed during normal operations to a nearly omni-directional antenna used during transfer orbit and "loss of lock" emergencies. But because of the spacecraft drift into an unfavourable attitude relative to the ground control station, three commands critical to this transition to omni-directional telemetry were not received and executed.

The ground controllers remained unaware of this until later. As a result, the satellite telemetry stayed configured with the narrow beam antenna operating and was available only for about ten per cent of the time during the following critical period.

The problems relating to configuring the satellite for transmission of omni-directional telemetry resulted in all the subsequent commands being sent in essentially a 'blind' mode, without the controllers being able to verify whether or not a command was received and executed by the satellite prior to sending subsequent commands.

All subsequent difficulties with the satellite, including the events leading to the depletion of the propellent, resulted from this.

Valve confusion: Specifically, non-receipt on board of critical parts of a ground command sequence which should have operated a safety isolation switch and prevented the propagation of a switching pulse from the attitude control electronics into the oxidiser isolation valves circuit in the propulsion system resulted in a configuration in which the oxidiser isolation valves were closed while the dual isolation valves were open.

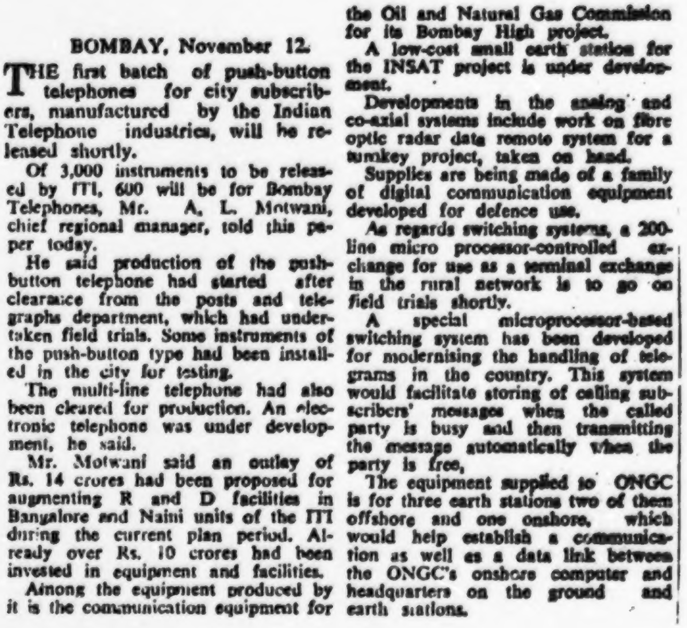
This resulted in high propellent use rates and negligible control thrust. The propellents were exhausted in less than an hour in this abnormal state. Under normal circumstances, a safety feature within the spacecraft would have prevented propagation of switching pulse into the propulsion sub-system isolation valves, the report said.

CSO: 5500/7034

BOMBAY TELEPHONE IMPROVEMENT PLANS TOLD

Bombay THE TIMES OF INDIA in English 13 Nov 82 p 3

[Text]



BOMBAY, November 12.

THE first batch of push-button telephones for city subscribers, manufactured by the Indian Telephone industries, will be released shortly.

Of 3,000 instruments to be released by ITI, 600 will be for Bombay Telephones, Mr. A. L. Motwani, chief regional manager, told this paper today.

He said production of the push-button telephone had started after clearance from the posts and telegraphs department, which had undertaken field trials. Some instruments of the push-button type had been installed in the city for testing.

The multi-line telephone had also been cleared for production. An electronic telephone was under development, he said.

Mr. Motwani said an outlay of Rs. 14 crores had been proposed for augmenting R and D facilities in Bangalore and Naini units of the ITI during the current plan period. Already over Rs. 10 crores had been invested in equipment and facilities.

Among the equipment produced by it is the communication equipment for the Oil and Natural Gas Commission for its Bombay High project.

A low-cost small earth station for the INSAT project is under development.

Developments in the analog and co-axial systems include work on fibre optic radar data remote system for a turnkey project, taken on hand.

Supplies are being made of a family of digital communication equipment developed for defence use.

As regards switching systems, a 200-line micro processor-controlled exchange for use as a terminal exchange in the rural network is to go on field trials shortly.

A special microprocessor-based switching system has been developed for modernising the handling of telegrams in the country. This system would facilitate storing of calling subscribers' messages when the called party is busy and then transmitting the message automatically when the party is free,

The equipment supplied to ONGC is for three earth stations two of them offshore and one onshore, which would help establish a communication as well as a data link between the ONGC's onshore computer and headquarters on the ground and earth stations.

CSO: 5500/7035

BRIEFS

PLANS FOR 1985 SATELLITE--Jose Antonio de Alencastro, president of Brazilian Telecommunications Inc., has disclosed that the domestic satellite to be launched in 1985 will cost $231 million. The satellite to be launched in 1985 will cost $231 million. The satellite will be used for the dissemination of educational and health messages and once it is hooked up to the television system it will help to keep the people more informed. The satellite will also be used in aviation control, national security and as a support for large projects. [PY021755 Rio de Janeiro O GLOBO in Portuguese 30 Nov 82 p 20 PY]

CSO: 5500/2019

WORK OF 'ANN' NEWS AGENCY DESCRIBED

Managua EL NUEVO DIARIO in Spanish 17 Oct 82 pp 1, 7

[Text] When one of the thousands of peddlers who appeared in the Oriental black market after the victory of the revolution yelled frantically, "for sale, a typewriter with a telephone inside of it," he did not realize that he had in his hands the material basis of the beginning of the activities of ANN [New Nicaraguan News Agency], the first international news agency of a pluralistic and objective nature which teaches the revolution abroad.

In fact, what the peddler was selling was nothing less than a teletype machine with a transmitter, one of the thousands of different articles which were looted during the war of liberation.

Carlos Garcia Castillo, director of ANN, thus explained to us how the recovery of this teletype machine, which had belonged to TELCOR [Nicaraguan Telecommunications and Postal Services Institute], for 500 cordobas was the beginning of the gigantic task of competing with the transnational news agencies which every day distort the reality of the revolutionary process so as to provide justification for aggression against our country.

Carlos Garcia said that ANN made the first broadcasts beamed abroad with that teletype machine recovered at Oriental Market which later was supplemented with other equipment provided by TELCOR.

Two Machines and Seven Newspapermen

All this goes back to the 19th of October 1979, exactly 3 months after the popular victory, when the ANN offices were set up on the seventh floor of the Zacarias Guerra building, where seven newspapermen had to stand in line to write their reports because at the time there were only two typewriters.

Three years after that beginning, the ANN is beginning to appear in the editorial offices of very prestigious periodicals in several countries. Its reliability and objectivity are causing a growth in the demand for its services by the various media--the press, radio and TV--of several countries.

The New Order in Information

We must recognize that after 3 years of struggle, ANN's growth has been remarkable considering its great physical limitations and the arduous struggle for a new order in international information conducted by the Third World nations, which from time immemorial have been forgotten in world news and which are only mentioned by the large news services when there is an earthquake or blood is flowing in rivers as a result of the wars of liberation.

Carlos Garcia explained that the original idea for the news service came up during the first days after the victory when it already had become evident that the pro-North American transnational news services were creating with their news reports a climate favorable to what today is becoming almost an imminent invasion.

The triumph of the revolution was only a few months old when imperialism mobilized its enormous propaganda machine aimed at influencing world public opinion against Nicaragua following the extraordinary admiration it awakened among the peoples of the world as a result of the overthrowing of the Somoza dynasty.

After observing this scene, which was not at all flattering for the process, the revolutionary leaders established an instrument which would combat the campaign of distortion, defamation and slander which was becoming a common occurrence abroad.

The Policy of Truth

ANN decided to celebrate its third anniversary on Sunday, 17 October, the anniversary of the assassination of Commander Pedro Arauz Palacio since his guiding principle and his spirit were influenced by the unforgettable words of Commander "Federico": "The policy of truth is the revolution's policy."

In view of the high cost of communication, ANN now has been converted into a mixed corporation to which both private and public means of expression belong. This corporation consists of CORADEP, The Peoples' Radio Broadcasting Corporation; the FSLN, Sandinist Liberation Front, through its official organ BARRICADA; and EL NUEVO DIARIO, a private newspaper.

The now decrepit teletype from the Oriental Market has the company of 19 other machines, more modern ones, which is an indication of the obvious growth of this news service which after 3 years has not given up its intention of expanding throughout the world, a challenge which 25 ANN newspapermen and translators now face.

Its installations are now on El Triunfo Street in a building formerly occupied by the Alliance Francaise which was not damaged by the 1972 earthquake. To carry on its endless struggle against foreign disinformation, ANN has, in addition to its 20 teletype machines, four telex numbers and three direct channels by satellite which operate 24 hours a day, linking it with Mexico, Paris and Moscow.

Foreign Correspondents

At the present time ANN has bureaus in Mexico, Panama, Costa Rica and Honduras, from which last-named country the female correspondent for El Salvador and Guatemala, stationed in Honduras because of the dangerous situation which the ANN correspondents face in those two countries, was recently expelled after being tortured.

In Europe, ANN has correspondents in Paris and Sweden. There is also an ANN bureau in Mexico where the most prestigious periodicals subscribe to the news service among which are UNO MAS UNO, EL DIA, the radio media, universities, Latin American documentation centers and other international news services.

Garcia said that among its most notable efforts to penetrate the tangled world of international news, ANN has signed a cooperation agreement with IPS, International Press Service, with headquarters in Italy, which disseminates 7,000 words by ANN daily to the five continents.

Of these 7,000 words daily, IPS assigns 3,000 words to the ASIN, its "Action of National Information Systems," which provide service to important periodicals, radio and TV in Latin America and the Caribbean, including among others, Cuba, the Dominican Republic and Jamaica. The other 4,000 words are assigned to the IPS world network.

New Foreign Bureaus

The growth of the news service is also reflected in the opening in the near future of new bureaus in New York, Washington, Venezuela and Canada. By the beginning of 1983, ANN bureaus will be established in the German Federal Republic and Holland.

Judging from the reaction by important international communication media, ANN's prestige and reliability are beginning to have an impact even on the great media of the industrialized nations.

A magazine in French called DEL SUENO A LA REVOLUCION, which appeared recently in Paris, quotes extensively the ANN worldwide services.

Another prestigious communication enterprise, the LATIN AMERICAN NEWS LETTER, with headquarters in London, has shown its admiration for the objectivity of a revolutionary news service which daily disseminates the pluralistic dimension of the revolution.

LATIN AMERICAN NEWS LETTER wants to buy the services of ANN "where space is given to interviews with opposition leaders as well as news which highlights the achievements and advances of the revolution."

Radio Sweden calls ANN daily at 0500 hours to obtain a selection of Central American news.

Prestigious European periodicals such as EL PAIS of Spain, LA CROIX--a Parisian Christian daily--L'HUMANITE, LE MONDE, LIBERATION constantly highlight reports on Nicaragua sent to the world by ANN. Swedish, Finnish, Danish, English, German, Swiss and Dutch media also have quoted the ANN news service.

Bulletins in English

In view of this growing interest in knowing our true domestic conditions, begining in November, bulletins in English will be published primarily for distribution in the Scandinavian countries, the German Democratic Republic, England, the German Federal Republic and Holland.

Finally, it should be mentioned that after 3 years of tireless work in the struggle against foreign disinformation, ANN broadcasts in English, French and Spanish.

In the 3 years since its foundation, part of the road has been successfully traveled, but the road is still long and full of thorns. Garcia does not assume a triumphant stance. His goal and that of his colleagues, at this time of celebration, is to increase their level of efficiency and to grow, spurred on by the violent attacks by the imperialist transnationals whose hypocrisy, cynicism and derision are also growing at an unrestrained rate.

All the members of EL NUEVO DIARIO greet their colleagues at ANN on its third anniversary and wish them still greater success in the hard struggle they have ahead of them. We know that to the extent that the sentiment for change grows among all peoples, the true voice of the revolution will swell up like a giant echo throughout the world.

9204
CSO: 5500/2015

TELEVISION, TELEPHONE INDUSTRY SAID TO BE THRIVING

Damascus TISHRIN in Arabic 26 Oct 82 p 4

[Article by Naji As'ad: "Tour in Plants of General Electronic Industries Company: 55,000 Colored Television Sets; 15,000 Black-and-White Sets; 100,000 Telephone Apparatuses; Telephone Exchange Boards With Capacity of 40,000 Lines Included in Company's Plan, Implemented at 97 Percent Rate; Idle Capacity in Aleppo Plant for Black-and-White Television Screens"]

[Text] Syria has been a forerunner in introducing electronic industries within the framework of the industrialization plans based on meeting the local market needs for television sets, as well as meeting the future needs and the rising demand for these sets, especially in the wake of the major expansion in electrification projects which cover nearly the entire Syrian countryside.

In spite of this industry's international instability due to constant developments emerging from the electronic age, and in spite of the fact that these developments are confined to a number of international companies, making self-reliance on local resources for the survival of this industry an impossibility--in spite of these things, the sector in charge of this industry in our country has been able to work, produce and keep pace with the international developments in this precision industry. This has been accomplished with coordination and cooperation with the international companies and through the development of local expertise so that we may be able to keep up with this industrial development and produce television sets and other communication equipment to supply the local market needs of these apparatuses at prices the citizens are able to afford, in addition to insuring the soundness of the equipment by supplying the spare parts for a period of 10 years and supplying the cadre qualified to carry out the maintenance work.

Even though the Electronic Industries Company comes under the category of conversion industries, it has been able to realize big surpluses for the state budget and, at the same time, it has made the investment necessary to satisfy the market need for telephone and television sets.

This company was the only specialized electronic industries company before the recent founding of the Syrian-French (Sircotel) Company, and beofre this company started producing electronic exchanges.

It is worth noting that the Electronic Industries Company, which is controlled by the General Engineering Industries Organization, was founded in 1960 at first as a commercial company. But since then, it has turned into an industrial company that comprises 10 plants. Five of these are main plants, namely: the colored television plnat, the black-and-white television plant, the telephone exchange plant, the telephone sets plant and the Aleppo white-and-black television screens plant. Five are subsidiary plants that produce parts for the products of the main plants, namely: The printed circuit plant, the mechanics plant, the plastics plant, the carpentry plant and the (steropor) packaging materials plant.

The company also has 17 maintenance centers distributed throughout the country's various governorates, including 4 centers in Damascus.

Human Element First

We asked Dr Nazir Kusa, the general director of the Electronic Industries Company, about the decisive factor in this industry. He said in reply: The electronic industry is distinguished from the other industries insofar as the production capacity ceiling is concerned because the human factor plays the fundamental role in the production process.

He noted that in many cases, the increased capacity is proportionate to the increase in the human factor and an enhanced capability in view of the precise adaptability of the maximum capacity to the local market needs and according to the planned production.

Regarding the company's skilled cadre, he said: A total of 1,400 production and administrative workers work a single shift in all the company's plants and maintenance centers. All the production workers have gone through training courses inside and outside the country. The company also includes a considerable number of highly trained and qualified engineers and graduates of the middle-level institutes, vocational training centers and industrial high schools. Women constitute nearly 70 percent of the total number of workers. This cadre has been able to meet the manufacturing production needs which are rising by the day.

Country's Need of Television Sets

The company's production plan is based on the country's needs for the equipment produced by the company. These needs are estimated at nearly 60,000 colored television sets with 20-inch and 27-inch screens and 15,000 black-and-white television sets. As for the needs for telephones and telephone exchanges, they are determined on the basis of the needs of the Public Telecommunications Agency.

Accordingly, the 1982 plan provides for the production of 55,000 colored television sets of both screen sizes and 15,000 white-and-black television sets.

The telephone and telephone exchange production plan calls for producing: 60,000 disc and button dial telephones; 25,000 semiautomatic telephones; 15,000 manual telephones; 20,000 mobile lines; 20,000 manual and semiautomatic lines.

It was planned for this year's production value to amount to 240 million Syrian pounds, of which 171 million pounds worth was to be produced by the end of the 9th month of this year. By the 9th month, the implementation rate of the company's plan for all products amounted to 97 percent of the available production capacity.

As for sales, it was planned to achieve a sales volume of 240 million Syrian pounds for the entire production. By the 9th month of this year, the company sales amounted to 97 percent of its sales plan for the current year.

Development of Company Sales in 4 Years

By examining company sales in the past 3 years, it is evident that the sales rate has been rising in an encouraging manner. In 1979, the production value amounted to 119 million Syrian pounds, sales value to 114 million pounds and the profits to 15 million pounds.

In 1980, the production value amounted to 182 million pounds, the sales to 168 million pounds and the profits to 45 million pounds.

In 1981, the production value amounted to 160 million pounds but the sales rose to 198 million pounds as a result of the sale of products rotated from 1980. The profits amounted to 76 million pounds.

It is noted that there was a drop in production in 1981 as a result of the suspension of production for a period of 2½ months because the company's production lines were modified and numerous workers were retrained in order to develop the industry and to produce a new kind of colored television set which was marketed as of the beginning of the year.

As for this year's plan, the planned production amounts to 240 million Syrian pounds and the sales to 240 million pounds, as we have already noted. But the profits are expected to amount to only 27 million pounds, as a result of the application of the customs fees law to the public sector companies, including the General Electronic Industries Company, whereas this company was exempted from such fees in past years. The company is expected to pay nearly 60 million pounds in customs fees during the current year, and here is where the real profit balance lies.

What About Aleppo Screens Plant?

It is worth noting that a contract was concluded in 1974 to set up a plant for the production of blakc-and-white television screens with a capacity of 100,000 screens annually. The plant was supposed to start production in 1977, however, its production did not start until 1980. This delay caused the plant to experience marketing difficulties. On this issue, we interviewed the company general director who said: The delay of the plant's production has led to marketing obstacles. At the outset of operation in 1980, the local market turned strongly to colored television. This made it impossible to operate the plant at full capacity because it was impossible to market the production volume, estimated at 100,000 screens annually. The matter was dealt with by many of the authorities concerned and the following recommendations were made to utilize the capabilities available in the Aleppo television screens plant:

Continue the plant's production of black-and-white television screens within the limits of the local market needs, including the needs for the black-and-white television sets that continue to be produced and the needs for maintenance of the black-and-white sets marketed in the country in previous years.

The company management has been assigned to rebuild returned black-and-white screens in order to reduce production costs, considering that the glass of these screens, constituting nearly 60-70 percent of the cost of each screen, can be reused.

The company has also been entrusted to study the possibility of rebuilding colored television screens through use of the plant's equipment and machinery and by adding some necessary equipment.

Utilizing the excess land and buildings at the plant site to set up other industrial projects.

The Aleppo black-and-white television screens plant is one of the most visible effects of the instability in the electronics industry markets.

Regarding the local manufacturing percentage of the television sets, the general director has said that 80 percent of the black-and-white television sets are manufactured locally. As for colored television, work was started this year to manufacture only 20 percent of the sets. This percentage will rise to 30 percent next year and is expected to rise still higher in the following 5 years, keeping in mind that most of the materials involved in the production are imported.

Big Demand for Colored Television

Regarding demand among the citizens for colored television sets sold by the company, Dr Kusa has said: In the past 2 years, we experienced a big development in the citizen's attitude toward new sets. The company's sales of colored television sets reflect the citizen's satisfaction with the colored television set produced locally. The set is distinguished by several features that induce the citizen to purchase it:

The quality of the locally produced set is as good as that of the internationally produced sets. The set's price is competitive compared to the prices of the other kinds of sets sold in the area. The set is guaranteed for a year and the spare parts are available for 10 years, in addition to easy availability of maintenance through the company's centers which are distributed throughout the country.

These features have raised the citizens' demand for colored television from nearly 19,000 sets in 1979 to 55,000 sets this year.

On the other hand, the production of blakc-and-white sets has been reduced from 60,000 to 15,000 sets annually. Therefore, it is noted that there is no stock of any of the company's products.

Firm Connection With International Models

Proceeding on the basis of keeping up with the rapid developments in the world of electronics, every two years the company invites international firms to bid on developing equipment and models with the aim of acquiring the latest model manufactured. Each new model the company produces has more modern features than the previous models.

Company's Opinion on Television Fee

The problem of the television fee continues to fact citizens whose sets have worn out after long years of use. It is well known that this fee is not cancelled unless the television set is destroyed at the company. Regarding a practical formula to solve this problem, the director has said:

A draft plan has been presented in cooperation with the Ministry of Finance providing for cancellation of the fee for sets that have been in use for 10 years. The plan also provides for collecting the fee for 5 years in advance, on new sets. This fee would be paid upon the company's delivery of the set.

Should this decree be issued, it will save the Ministry of Finance a lot of trouble and fee collection costs.

What About Video-Recorder Production Plan?

The general director pointed out that there was no plan to produce video recorders, only a study on the possibility of producing them. The study has shown that this type of project is not economically feasible because of the vast investments it requires, and because of the instability of the constantly developing video recorder industry. To create conditions for the success of this industry, a large volume of video recorder equipment must be produced and a large market must be insured. For this reason the video recorder industry is confined to a limited number of international firms.

He added that within the framework of new industries, the company is currently studying the possibility of producing subsidiary electronic telephone exchanges with small capacities ranging from 50-500 lines.

He also noted that there are numerous factors which, if present, will help the company to develop its activities and to expand its industries to include new and varied products.

Company Workers

Hisham Bakri, the chairman of the company's union committee, has summed up to us the conditions of the workers, saying:

Because the company was founded long ago, the workers enjoy a large degree of stability in several respects. During recent years, the company's 1,400 workers have achieved numerous gains, most of them realized under the canopy of the glorious reform movement led by comrade struggler Hafiz al-Asad. These gains include:

Free medical care for all company workers. There is also a cooperative fund system to provide medical care for the workers' families. This year, medical care for the workers' families became semifree within the framework of certain cost regulations and ceilings.

There is a kindergarten for the workers' children which can accomodate 50 children.

There is a cooperative store that supplies the company workers' needs.

Transportation from home to work is assured for all workers.

In 1981, the problem of illiteracy among the workers was eliminated and we cay say that there isn't a single illiterate male or female worker in the company.

A central clinic has been opened in the company and there is a project to open a restaurant to serve the workers meals at token prices.

There is family compensation for the families of both male and female workers.

Decree No 30, issued this year, has expanded the union's role in the sphere of work control generally, and has enabled the union to take part in all affairs conducted by the management.

The union committee chairman added that there is a housing association for the company workers and nearly 200 workers are members and approximately 42 housing apartments have been delivered so far. Moreover, 80 members in the Barzah area and 25 members in the (Qadasya) area (are in the process of being approved to receive apartments).

The committee chairman also noted that there are numerous obstacles connected with the incentives, considering that the incentives are tied to the old salary and system of promotion. In the 1970's, a draft decree was presented to adjust the workers' wage scale. However, the answer to many of these demands has been: Wait for the unified labor law.

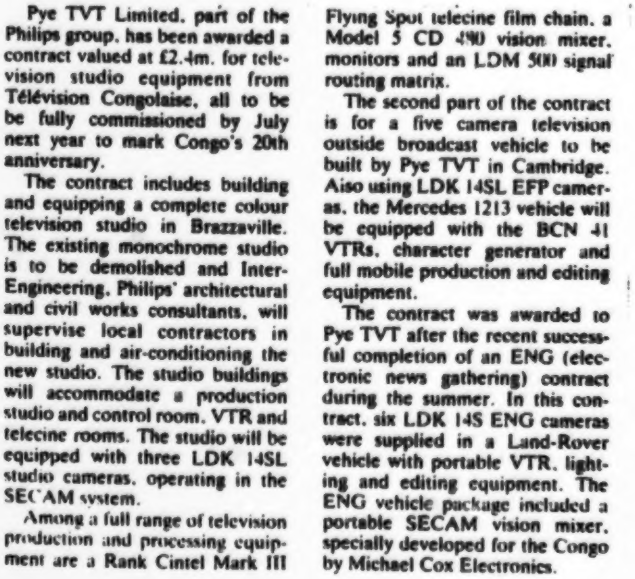
8494
CSO: 5500/4504

CONGO

COLOR TELEVISION STUDIO PLANNED

London WEST AFRICA in English No 3406, 15 Nov 82 p 2980

[Text]



Pye TVT Limited, part of the Philips group, has been awarded a contract valued at £2.4m. for television studio equipment from Télévision Congolaise, all to be be fully commissioned by July next year to mark Congo's 20th anniversary.

The contract includes building and equipping a complete colour television studio in Brazzaville. The existing monochrome studio is to be demolished and Inter-Engineering, Philips' architectural and civil works consultants, will supervise local contractors in building and air-conditioning the new studio. The studio buildings will accommodate a production studio and control room, VTR and telecine rooms. The studio will be equipped with three LDK 14SL studio cameras, operating in the SECAM system.

Among a full range of television production and processing equipment are a Rank Cintel Mark III Flying Spot telecine film chain, a Model 5 CD 490 vision mixer, monitors and an LDM 500 signal routing matrix.

The second part of the contract is for a five camera television outside broadcast vehicle to be built by Pye TVT in Cambridge. Also using LDK 14SL EFP cameras, the Mercedes 1213 vehicle will be equipped with the BCN 41 VTRs, character generator and full mobile production and editing equipment.

The contract was awarded to Pye TVT after the recent successful completion of an ENG (electronic news gathering) contract during the summer. In this contract, six LDK 14S ENG cameras were supplied in a Land-Rover vehicle with portable VTR, lighting and editing equipment. The ENG vehicle package included a portable SECAM vision mixer, specially developed for the Congo by Michael Cox Electronics.

CSO: 5500/48

SWEDE SAYS KENYA MAY INSTALL COMPUTER EXCHANGE

Nairobi THE NAIROBI TIMES in English 2 Nov 82 p 3

[Text] NAIROBI, Monday, (*KNA*) — Kenya will be able to instal a fully electronic computer controlled telephone exchange.

Disclosing this, a Swedish national who is also the vice-president public relations of the multinational corporation M Ericson, Mr. John Meuring, said that this exchange will enable subscribers to dial directly without operator's assistance to any part of the world.

Meuring who will also instal the equipment, said that it has been proposed to the Kenya government to extend by 5,000 lines the telephone system in the country.

Meuring said, however, that with the installation of a computer there will be no need for operators, but he assured operators that they cannot be done away with as they will always be needed in certain specialised areas.

Meanwhile, as the ITU conference entered its last week in Nairobi, more delegates jetted in this morning.

Those who arrived were two senior delegates from Bulgaria and Senegal.

The two, Mr. Krekmaski, Nikola, vice-minister of telecommunications of Bulgarian peoples' republic and Mr. Assane Ndiaye, director-general of Senegal's posts and telecommunications, were received by Mr. Omar Soba, an assistant minister for transport and communications.

Soba said this last week the conference will mainly be characterised by adopting of various important resolutions.

CSO: 5500/47

BRIEFS

INTELSAT V REFERENCE INSTALLATIONS--The international communications satellite organization Intelsat awarded the German Post Office a contract to install and operate two of the four reference installations for the Intelsat V satellite, which are scheduled for installation in Europe. As of 1984, the Time Division Multiple Access (TDMA) mode will be operable from a large number of earth stations. For communications traffic across the Atlantic and in the Indian Ocean area, such reference stations are required in order to supervise and synchronize the large number of ground stations which have radio communication with one another. [Text] [Wuerzburg ELEKTROTECHNIK in German 27 August 82 p 6]
9544

CSO: 5500/2546

HIGH TECHNOLOGY ELECTRONICS FIRMS GIVE 1981, 1982 RESULTS

Paris LES ECHOS in French 29 Sep 82 pp 19-20

[Article by Colette Menguy: "High Technology On the Paris Exchange"]

[Text] The high-technology sectors such as data processing, telematics, office automation, robotics and telecommunications are all present on the Paris Stock Exchange.

Telecommunications, in particular, is represented by CIT-ALCATEL [International Telephone Company-Alsatian Company for Atomic, Telecommunications and Electronic Construction], Thomson-CSF, and SAT [Telecommunications Corporation]. Last year, business in this sector suffered from the slowdown in the placement of orders by the PTT. And for these firms, growth is currently dependent on the business they do abroad, where they are netting some large-scale contracts.

Although CIT-ALCATEL and SAT were able to show improved results for the financial year just ended, the CSF's telephone sector, on the other hand, was hard hit. Thomson-CSF, which has had to set up a reserve of 225 million francs for future losses on long-term contracts, ended its financial year with a loss of 230.7 million francs.

The evolution of the results reported by the other firms we have looked at has been contrasty: Intertechnique, TRT [Radio and Telephone Telecommunications Company], SINTRA-ALCATEL [Industrial Company for New Radio Techniques-ALCATEL] and SAGEM [Company for General Applications of Electricity and Mechanics] improved their profits, while MATRA [Mechanics, Aviation and Traction Company], Signaux, and Telemecanique experienced a decline, a sizable one in some cases.

Wage-and-salary-related costs and, to a great extent, the sharp rise in financing costs were major factors affecting the results. The financial situation of the French firms is--with the exception of CIT-ALCATEL--not as strong as that of the American firms in this sector. Their indebtedness is higher and their funds more limited. Net profit margins greater than 2 percent are the exception. Intertechnique shows the highest rate of profitability, followed by TRT.

The year 1981 was also unfavorable to Texas Instruments and to Xerox as well. The first of these saw its results plunge over 40 percent, while those of Xerox stagnated at +6 percent. The American firms were penalized by a strengthening of the dollar and by greatly stepped up competition. The financial situation of these two companies, however, remains strong. Their current and available assets are sufficient to cover their total indebtedness ness, and these firms have large standby profits reserves

Generally speaking, the year 1982 promises to have been more severe toward the French as well as the American firms. Although activity has remained at a sustained level, profit margins will probably have shrunk.

CIT-ALCATEL: Up 31 Percent

CIT-ALCATEL's consolidated turnover last year showed an increase of 31 percent to 10.7 billion francs. Its net profit, which in 1980 had dropped by 154.2 million francs to a level of 62.5 million, recovered somewhat to a level of 74 million francs. The instituting of a fifth week of paid annual vacation resulted in an additional outlay, for the group, of 20 million francs.

In 1981, in a difficult economic environment, CIT-ALCATEL turned in a good performance. In the transmission and switching sectors, the firm achieved several technical successes. Noteworthy in the switching sector were its inauguration of the E10-B subscriber exchange at Brest, the putting in service of the E-12 toll centers at Massy and Caen, and the choice of its E10-S system by the PTT.

In the transmission domain, it received a number of large foreign orders. Furthermore, it consolidated its positions in the domain of facsimile.

In 1981, its subsidiaries accounted for 58 percent of its consolidated turnover. In the public telecommunications sector, CIT-ALCATEL acquired a 25 percent share in Lynch Communications Systems, an American company that is to take part in the development of the E10-S time-division switching central.

For ALCATEL Electronics (55 percent of CIT-ALCATEL's total turnover and 52 percent of its total orders), 1981 saw the putting in place of its office automation plan.

The private telecommunications sector, with TELIC [Industrial and Commercial Telephony] ALCATEL, GST [expansion unknown]-ALCATEL, and Intervox, experienced a growth of 19 percent in sales and of 39 percent in new orders. Growth has also been impressive in data-processing peripherals (Transac ALCATEL) and mail processing, where order bookings are very much on the increase.

Information processing services showed only moderate growth last year.

At the general meeting of the shareholders, the company's president, Georges Pebereau indicated: "The expected 1982 growth (of the activity of the group) will be considerably less than in 1981... It should nevertheless reach a satisfactory level, assuming the volume of orders received from PTT remains consistent with forecasts."

It should be possible to improve earnings, but their rate of improvement will undoubtedly be less than that of the activity as a whole; this is because of difficulties that persist in certain subsidiaries.

Since the beginning of the year, the CIT-ALCATEL group has landed several large contracts abroad: In Malta, Sri Lanka, Morocco, Hongkong and, above all, India.

SINTRA-ALCATEL: A Good Year, Up 33 Percent

1981 was a good year for this company, which chalked up a growth of 33 percent in its turnover, to 822 million francs. Orders received increased by 25 percent to 1,287 million francs, of which 184 million francs originated abroad. Net profits rose from 15 to 17.25 million francs.

In the civilian domain, SINTRA-ALCATEL turned in good performances and was awarded a PTT study contract for the Teletex terminal.

In the military domain, the company obtained a large order from Litton under a rocket-guidance system program. It has also made forward strides in its development of military radio communications.

After implementing its large-scale program of industrial expenditures in 1980, at Marcq-en-Baroeul, its investments dropped off considerably last year, from 47 to 25.5 million francs.

Because of increased indebtedness--owing mainly to its having taken over, in 1980, of CIT-ALCATEL's visual display and radiotelephony activity in the field of submarine detection--its financial costs have skyrocketed: 18.3 million francs in 1980 and 41.3 million francs in 1981. It has maintained its dividend of 26 francs per share.

As of 30 June 1982, its revenues totaled 390.24 million francs and a sales growth of 25 percent for the entire year is being anticipated. Earnings will still be affected by financial charges. And by year-end 1982 its order bookings should total 2 billion francs.

To improve its financial position, the company has just announced a new 120-million-franc convertible debentures issue.

MATRA: Earnings Curtailed By Automobile and Timer Activities

The parent company's traditional activities experienced a new and vigorous growth last year: Its military sector's gross revenues increased by 48.5 percent, and its space sector's by 84 percent.

On the other hand, certain branches, such as timers and the automobile, experienced serious difficulties, chalking up heavy losses that adversely affected the firm's consolidated accounts and brought about a plummeting of the group's net earnings, from 189.7 million francs in 1980 to 79.37 million in 1981 (versus an increase for the balance of the group from 159.68 million to 206.7 million).

In the "telecommunications" branch, the past financial year has been devoted to a rebalancing of its research and development efforts and to the continuation of its industrial and commercial restructuring, especially with a centering of industrial production on TERMAT [expansion unknown], SIDEP [expansion unknown] and TPL [expansion unknown], a regrouping of distribution activities around PERITEL [expansion unknown], and a reconversion of industrial tooling to electronic production.

Total turnover of the telecommunications branch last year increased by 28 percent to 729 million francs. This year, the companies should end up with an increase of about the same order as last year, with a positive earnings bottom line. Last year, MATRA increased its share in SOFIMATEL [expansion unknown] to 62.7 percent.

As for its data processing branch, MATRA took control of MBC [expansion unknown] last year; the latter company has a good position in French top of the line micro-data progressing. An agrement has also been signed with Tandy Radio Shack to form a joint subsidiary with MATRA as the majority stock-holder. And lastly, a 35-percent participation in the capital of the AXEL [expansion unknown] company (microcomputers) was acquired.

The beginning of 1982 saw the entry of the state into MATRA (with 51 percent ownership), while its media assets were separated from its assets to form MMB [expansion unknown].

Jean-Luc Lagardere told the stockholders meeting that the parent company's net profits are expected to return to around the 1980 level (which was 253 million francs versus 175.7 million in 1981), or around 250 million francs.

No indication was given as to the consolidated results. However, losses among the subsidiaries that are in trouble will be sharply curtailed this year.

It should be noted that MATRA, which increased its capital this year--an increase reserved to the state, to be sure--is not concerned by the law restricting dividends.

Thomson-CSF: A Gloomy Year

Thomson-CSF had a bad year in 1981, when the group registered a net loss of 70.44 million francs, whereas, for 1980, it had chalked up a net gain of 307.57 million francs. Its annual revenues increased by 12.5 percent to 25,100 million francs, 48.5 percent of which earned outside of France.

Operations remained in the black, with a profit of 702 million francs, which was close to that of 1980. But owing to the very poor results turned in by Thomson CSF Telephone and CGR [expansion unknown], it was found necessary to set up large reserves, which entailed declaring a deficit for the financial year, a deficit that required the company to skip its dividend .

Its telephone activity has cost and continues costing CSF dearly, but,at the company's annual meeting, its former president, Jean-Pierre Bouyssonnie, pointed out that CSF could not have remained absent any longer from this sector without serious adverse effects on the maintenance and development of its positions. A major forward step was taken in this domain in 1982, with the inauguration of the MT-20 time division switching center. Thus, 10 months behind CIT-ALCATEL, CSF made its entry into time-division switching. This year, the MT line's share in total annual telephone revenues will be 70 percent.

Several MT-20 exchanges have already been or are in the process of being installed abroad, particularly in Iraq, Greece and Bolivia.

Activity was rather calm during the first half of this year, with a consolidated sales increase on the order of about 8 percent, to a total of 12,578 million francs.

SAT: An Enhanced Position in Cables

This group's annual turnover--which includes proportionately and for the first time that of INFODIF [expansion unknown]--totaled 2,064 million francs, and its net profit 26.26 million francs, versus 1,780 million and 23.98 million respectively last year (without INFODIF). Electronics accounted for around 75 percent of total revenues in 1981.

Orders from PTT lagged further this year; and last year, this administration was the source of only 49 percent of the group's revenues, versus 65 percent in 1974, and of 40 percent of its orders versus 65 percent.

It was to ameliorate this situation that the group undertook last year to convert to new techniques and new markets. In optical fibers, SAT associated itself with General Optronics; in teledistribution, it strengthened its agreements with Tonna Electronique; in switching, it increased its holding in Interconnect Planning Corporation [IPC] (United States).

But it is in the cables domain that it effected its major operation. After launching an OPE [public offering of exchange] with SILEC [Electric Links Industrial Company] (7 shares of SILEC for 2 of SAT), SAT increased its participation in this operation from 22.6 to 50.8 percent.

Financial Figures

	(1) Chiffre d'affaires 1981 (en millions de F)	(2) Bénéfice net 1981 (en millions de F)	(3) Dettes à long terme (en millions de F)	(4) Dettes à court terme (en millions de F)	(5) Valeurs réalisables ou disponibles (en millions de F)	(6) Marge nette en %
CIT-Alcatel	10.742	74	1.362	1.178	4.000	0,7
Sintra-Alcatel*	822	17,25	155	774	414	2,1
CSF	25.089	— 70,44	1.940	23.118	13.872	—
Intertechnique	702	31,19	202	277,31	297,51	4,4
Matra	6.683	79,37	1.204	7.448	5.328	1,2
Sagem	3.939	63,42	334	1.223	1.162	1,6
SAT	2.067	26,26	174	953	591	1,3
Signaux	5.233	61,93	457	1.788	1.657	1,2
Télémécanique	3.445	51,90	464	1.382	1.163	1,5
TRT	1.327	48,50	25	1.008	728	3,7
* *Non consolidé* (7)						

Key:

1. Total Revenues in 1981 (in millions of francs).
2. Net Earnings in 1981 (in millions of francs).
3. Long Term Debt (in millions of francs).
4. Short Term Debt (in millions of francs).
5. Current of Convertible Assets (in millions of francs).
6. Net Margin (in percent).
7. Not consolidated.

The sum of these operations--which were carried out without consulting its shareholders--will enable the company to strengthen its position and improve its competitiveness.

At its annual meeting, the group's president, Jacques Boulin, made no secret of the fact that the general economic situation is a highly unfavorable one and that the expenses of its companies are going to increase. Nevertheless, he expressed confidence. The contracts that have been awarded to the SAR [as published] for studies on new products in domains of the future, such as the infrared, optical fibers and time-division switching, are at a record level.

Moreover--he added--as these studies near their completion, "We anticipate a recovery of growth that will mark the end of the period of conversion we are now going through."

The president did not exclude the possibility that he may have to call upon the stockholders for financial aid.

9238
CSO: 5500/2510

WAYS TO USE EXISTING CABLES FOR NEW TELECOMMUNICATIONS SERVICES

Paris LE MONDE in French 17-18 Oct 82 p 12

[Article by Philippe Chauvet, group leader, Experimental Activities, National Audiovisual Institute]

[Text] The French government will soon have to make some important choices about the technologic infrastructure that will allow the development of information and communications systems using video communication.

Without conjecturing about the final decisions of the ministries involved (notably communications and PTT, but also culture, research and industry, planning, and so on), we present a number of proposals likely to be adopted for reactivating the existing cable networks.

It will be possible to provide teledistribution services and programs on approximately twelve existing cable networks. These will make available at least three thousand connections, a network with a capacity of about twelve channels, and a low-speed return line.

Users will therefore have to be equipped with suitable selectors and receivers. It will thus be possible to test services such as program banks, games, and remote surveillance.

The projects will last two years, with a third, transitional year to move from experimental project status supported by the government, to autonomous financial and operational status. Six of the projects will begin in 1983, and the others in 1984.

Three of the twelve projects will include testing of services involving strong interaction, such as computer-assisted teaching, image or image sequence consultation in a conversational mode, interactive games, and interactive sound videotex. To this effect, users--a minority of them--will be equipped with microcomputers, special consultation terminals, videodiscs, programmable videotape recorders, and so on.

This program for the concrete launching of videocommunication services and programs on existing cable networks meets several objectives:

1) Test operational services on a full-scale basis, so as to draw experience for future options.

2) Elicit reaction and an expression of wishes from users. Current survey or marketing methods as applied to the mass audience are completely ineffective when they involve abstract products such as future videocommunications services.

3) Test broadcast conditions for the French program potential, and the adaptation of its sources to these new means of broadcasting. Problems such as access to program stocks, access to information about these stocks (catalogs) distribution, and remuneration of authors, will be examined on a full-scale basis.

4) Test the institutional, economic, and financial forms of organization likely to support the development of videocommunications, both on the part of local parties, and on that of the government and its agencies.

5) Test the economic possibilities of paid services and the possible modes in which these systems can eventually be reimbursed by users and by the various financial participants.

6) Continue research and innovation in the area of services and programs.

Our idea of an experiment that could be a true launching under the most realistic conditions possible, implies paid services. The participation of the state and local collectivities will make it possible to fill in the gap between costs and receipts, the latter of which will be low at first.

Advertising income must also be considered.

In the area of local programming, priority must be given to the culture and recreation sector. The two major sources of programs are television and the movies.

At the beginning, it would be desirable to provide a minimum amount of program resources common to all the experiments.

These resources, which could also be used as part of a request television service, will not exclude reliance on other programs! According to experience, cultural centers or movie house operators could be given the responsibility for programming in this domain.

For information, an inexpensive technology could be used at the starting phase of the experiment: display of written pages, with possible inclusion of image messages (photos, graphics), and segments of a newspaper of the air. We will also call upon teletext and radio technologies.

Local production must be of professional quality if we are to reach an effective audience.

And while it is entirely desirable to establish a collaboration with volunteer workers, the latter cannot regularly participate in camera work.

On the other hand, a small local production team is probably too expensive for a small network; it will thus be advisable to aim for teams that can work for several networks, at least initially. These teams could also use equipment available in cultural centers. This local production will definitely remain lower in volume than local programming.

National topical channels aimed at specialized audiences will be difficult to program at the local level. A non-exclusive, centralized organization can be created. It will be possible to distribute the program to the networks through Telecom 1 or by means of TDF (Television de France) or DGT (General Telecommunications Directorate) land-based networks.

This development of services and program teledistribution to existing cable networks will have to take into account the projects of local institutions and responsible individuals.

It is essential for this launching of teledistribution services to be based on locally formulated programming projects. This procedure is necessary to enlist genuine local partners and participants in this type of activity, particularly from local collectivities.

At the local level, programming responsibilities as a whole will be assured by a local structure which can assume one legal form or another according to local conditions (joint private and public participation, economic interest groups, associations, and so on).

We would like this structure to be as distinct as possible from the one responsible for management of the network.

Specifically, the structure will be the main contact with the ruling body for audiovisual communication, which will issue operation permits for communications services in all matters relevant to programs and programming.

The structure will be able to act upon specific subcontractor channels or to proceed with its own channel programming.

Localized on-site studies, project progress studies, and topical studies will thus be conducted in anticipation of the launching of the programs.

11,023
CSO: 5500/2540

WORLD DATA PROCESSING CENTER TO BE MANAGED BY PTT

Paris LE MONDE in French 29 Oct 82 p 36

[Unsigned article]

[Text] The World Data Processing Center has changed its subordination, going from the Ministry of Research and Industry, to the PTT. This decision is worrying some of the center's researchers.

According to Jean-Jacques Servan-Schreiber, president of the center, these fears are groundless. The change of affiliation came at his request, based on the forthcoming official decision to equip French cities with cable, thus replacing the telephone wire network serving subscribers with higher capacity fiber optics connections. This involves a very large investment of the order of some ten billion francs, partly financed by the National Savings Bank.

Mr Servan-Schreiber argues that this network must contain not only specialized equipment such as the terminal-directory, but also actual home data-processing tools whose design is entirely within the province of the world center. In order to ensure good coordination between the activities of the center and of the General Telecommunications Directorate (DGT), the request was made for a change of affiliation, negotiated by Louis Dubois, a member of the center's board of directors and former general director of telecommunications.
Mr Servan-Schreiber points out that the change confers no right for DGT to inspect the center's programs and that the center's board of directors, on which sit representatives of eight ministries, remains sovereign.

11,023
CSO: 5500/2540

LILLE TO EXPERIMENT WITH FIBER OPTICAL LINKS

Paris LE MONDE in French 20 Oct 82 p 23

[Article by Georges Sueur]

[Text] From our correspondent--Lille--The teledistribution commission for the Lille urban community (one million inhabitants) has decisively chosen fiber optics over coaxial cable, according to its president, Gerard Vignoble, socialist mayor of Wasquehal, at the conclusion of an exhaustive study.

While coaxial cable can carry only ten to 40 programs, fiber optics offers much greater possibilities and above all, offers the television viewer a genuine way to select his programs. He need only telephone a data bank.

For the Lille urban community, it is urgent to express its support of fiber optics. Implementation of the teledistribution network using this advanced technology will offer undeniable economic interest: the French fiber optics telecommunications industry will be the first to benefit. According to some documents, there is a potential market of 45 billion francs on French territory, with a development potential which could create several tens of thousands of jobs.

The urban community will sign an agreement with PTT, authorizing a cable experiment in the Saint-Sauveur neighborhood. This mini-network of only a few dozen connections will "test the feasibility of the system and will reveal the economic components of the project as a whole." Each subscriber will have simultaneous access to two or four programs out of the thirty-two which are available on the selected station. The second phase of the operation, planned for 1984-1985, will affect over three thousand subscribers.

There is a clear awareness that this experiment raises some problems, and this explains certain misgivings on the part of the General Telecommunications Directorate, which would like to retain monopoly over the distribution of televised images (other cities expect to develop the same type of network as the one in Lille; they plan to form a national association). The urban community of Lille feels it is appropriate to demonstrate imagination and come up with new administrative structures. With respect to commercial maintenance and administration, suggestions are being made for creating a new company with joint participation from the state, local groups, and industrialists. As for management and programming, the whole gamut of contributors and users would be involved through an economic interest group.

Mr Vignoble declared: "Elementary caution demands we recognize that we know very little today about the limits of the field of investigation which this new communications support will offer. Only on-site experimentation will enable us to make progress, provided we have first established a tangible tool which is both flexible and reliable."

11,023
CSO: 5500/2540

BRIEFS

THOMSON-CSF IN IRAQ--Thomson-CSF, which is modernizing the the equipment of the Iraq telephone network, announced in Paris that the company has just been awarded a contract for supplying a national and international transit center for the city of Baghdad. This contract, for several tens of millions francs, follows an order for a first transit center between the capital and the rest of the country, and for 28 subscriber centrals representing 375,000 lines in the process of being installed. All of the equipment delivered to Iraq is of the MT time-switching technology, and adds up to a total of one billion francs. [Text] [Paris LES ECHOS in French 8 Nov 82 p 9] 11,023

CSO: 5500/2540

BRIEFS

EXCHANGES FROM FINNISH FIRM—Telenokia [Finnish firm] has received an order from the Swedish Telecommunications Agency for digital exchange systems. The value of the contract is about 40 million Finnish markkas. Deliveries will take place in 1983 and 1984. The exchanges represent the most modern technology in the field, states Telenokia. According to the firm, the order means an important new penetration into a product area in Sweden for Telenokia. The order raises the market share of Telenokia in the total system to about 30 percent. The newly concluded agreement also makes possible continuation orders for production all the way to 1987, Telenokia stated. Continuation orders would raise the value of the contract to over 100 million markkas. [Text] [Helsinki HELSINGIN SANOMAT in Finnish 4 Sep 82 p 27]

CSO: 5500/2554

END

JPRS 82488

17 December 1982

Worldwide Report

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 253

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 82488

17 December 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 253

CONTENTS

WORLDWIDE AFFAIRS

Object of EURECA Program: Recoverable Instrument Platform (Michel Bignier; L'AERONAUTIQUE ET L'ASTRONAUTIQUE, No 95, 1982) 1

Sport Image's Stockholders, Shares Listed (Gerard Brachet; L'AERONAUTIQUE ET L'ASTRONAUTIQUE, No 95, 1982) 6

Payload of ERS-1 To Include Hyperfrequency Detector (Gerard Brachet; L'AERONAUTIQUE ET L'ASTRONAUTIQUE, No 95, 1982) 8

European Prospects for Launcher Propulsion Development (Jean Dardare; L'AERONAUTIQUE ET L'ASTRONAUTIQUE, No 95, 1982) 10

ASIA

BANGLADESH

Briefs

Chittagong Phone Exchanges 12

LATIN AMERICA

ARGENTINA

Briefs

New Satellite Ground Station 13
TV Channel Concession 13
Radio Station Concession 13
TV, Radio Station Licenses 13
Radio Licenses Renewed 13

SUB-SAHARAN AFRICA

MAURITIUS

French Aid To Enable Construction of Exchanges in North (LE MAURICIEN, 30 Oct 82) 14

MOZAMBIQUE

Briefs

New Automatic Exchange 16

SOUTH AFRICA

Briefs

Television Channels To Split 17

SWAZILAND

Briefs

SBS-2 18

WEST EUROPE

INTERNATIONAL AFFAIRS

Joining ECS Project Seen Speeding Up a Nordic TV Satellite (DAGENS NYHETER, various dates) 19

Norway Expresses Interest, by Anders Mellbourn
Could Affect Sweden's Tele-X, Nordsat, by Bjorn Lindahl

DENMARK

Danish TV Text Transmission Beginning in March 1983 (BERLINGSKE TIDENDE, 6 Nov 82) 22

Commercial Satellite TV Seen Economically Feasible by 1986 (BERLINGSKE TIDENDE, 6 Nov 82) 23

FRANCE

PTT Minister Urges Technology Transfer at ITU Meeting (D. Levy; ELECTRONIQUE ACTUALITES, 15 Oct 82) 25

Telecommunications Chief Talks at Fiber Optics Meeting (Daniel Mansion; ZERO UN INFORMATIQUE HEBDO, 4 Oct 82) ... 29

Sintra Alcatel Takes Loan, Revealing Investments, Activities (ELECTRONIQUE ACTUALITES, 5 Nov 82) 33

Telephone Organization Problem Involves Thomson, CGCT, Alcatel
(D. Levy; ELECTRONIQUE ACTUALITES, 5 Nov 82) 38

Transpac Network Doubles in Size; New 1983 Services Planned
(ELECTRONIQUE ACTUALITES, 5 Nov 82) 41

SAT Gains Capital, Increases Research, New Product Development
(ELECTRONIQUE ACTUALITES, 5 Nov 82) 42

Briefs
PTT Videocommunication Project 44
CGE's Indonesian Telephone Link 44
CIT Alcatel's Production Equipment 45

GREECE

Planning Continues for Connection With EURONET-DIANE System
(A. Papandropoulos; OIKONOMIKOS TAKHYDROMOS, 7 Oct 82) 46

NORWAY

Foreign Firms Seek Share in Digital Exchange Contract
(Knut Lovstuhagen; AFTENPOSTEN, 19 Nov 82) 48

SWEDEN

Briefs
Teledata Firm Formed 50

OBJECT OF EURECA PROGRAM: RECOVERABLE INSTRUMENT PLATFORM

Paris L'AERONAUTIQUE ET L'ASTRONAUTIQUE in French No 95, 1982 pp 37-39

[Article by Michel Bignier, director of space transportation systems for the European Space Agency: "Spacelab Program: The Future"]

[Excerpts] The fundamental objective of the EURECA [European Retrievable Carrier] program is the realization of an instrument platform that can be separated from the shuttle in orbit, operated as an independent satellite, retrieved with its payload, and reused. The success of the EURECA program will be measured in terms of the number of flights.

From the viewpoint of the user, the EURECA program will make available power levels (of the order of several kilowatts) and microgravity conditions (around 10^{-5} g) impossible to obtain on Spacelab missions. Furthermore, the flight durations and available operating times for experiments far exceed those offered by Spacelab.

One of the prime purposes of the EURECA program is to satisfy the needs of European users. This is why, for the first flight, the ESA [European Space Agency] plans to send up a microgravity payload as the mission's principal payload on which the design will be based. For example, optimal conditions for an experiment in the processing of materials under microgravity conditions requires that residual gravity and its fluctuations be kept below a certain level during periods that may be of very long duration for the growing of large crystals. It is obvious that, from this standpoint, EURECA holds out a very substantial advantage over Spacelab. It appears certain that, although in the initial phase of research in microgravity (experiments "just to see what happens" in Spacelab) human intervention can be meaningful, the future development of materials-processing in space will take place by way of automated space stations, of which EURECA is the precursor.

The evolution of space activities toward automated and profitable industrial applications in the domain of materials-processing and the life sciences is going to require new technological solutions and methods.

Robotics and remote manipulation will have to be called upon to perform these functions efficiently and flexibly. EURECA offers interesting possibilities for testing and validating very quickly the critical technologies involved in future programs of this nature. EURECA can be used for rendezvous and docking tests, for the validation of robot systems (particularly: activation, detection, data transmission between satellites and ground stations, manned operations), and for the qualification of devices for the connecting up of interchangeable electrical equipment. In the realm of microgravity research experiments, EURECA will provide chambers for the processing of materials by means of a robot system that will feed the raw materials and manipulate the samples being processed.

It should be noted that EURECA's design is determined essentially by the type of payload it will carry and by its mode of operation. The payload determines the complexity of the services required in terms of electric power consumption, heat dissipation and type of thermal regulation, processing and storage of data, and remote command, control, pointing and aiming requirements. The planned principal payload, the microgravity payload, will determine EURECA's design because of its high power and low acceleration requirements. However, EURECA will also be available for scientific and technical experiments. The term "mode of operation" designates the manner in which it is planned to use EURECA: The type of orbit necessary, in that the orbit has an important bearing on telecommunications with the ground-based facilities; real-time data processing requirements on the part of ground facilities for the surveillance and control of the payload; and all operations necessary for proper operation of EURECA and its payload. In response to the requirements of its first mission, specifically oriented toward the processing of materials in space, EURECA's design is being targeted on the following performance objectives:

--Payload weight: On the order of 1,000 kg;

--Power delivered to payload: On the order of 2 kw;

--Residual acceleration in orbit: 10^{-5}q;

--Altitude: 500 km;

--Life in orbit: On the order of 4 months fully operational; at least 6 months between launching and retrieval.

EURECA will therefore supply its own energy (deployable and retractable solar panels), its own thermal regulation, stabilization, propulsion systems needed to attain its 500-km altitude and then to return to the orbit of the shuttle that is to retrieve it, data storage and transmission systems, and all the other systems necessary to the life of an independent and retrievable instrument platform. One of the important aspects that will govern the actualization of EURECA is to be the reuse of equipment already actualized, to put to good account the investments already made in Europe.

Present plans call for EURECA's first flight to take place by the end of 1986 or the beginning of 1987, and for the instrument platform to be equipped and ready for installation of its payload 1 year prior to its launching.

Never having as yet been done elsewhere in the world, the project is thus an ambitious one--though one whose developmental cost (of the order of 700 million francs) is relatively modest and will provide Europe with a unique space facility within the medium term--and a reusable one with a potential for specific applications of its own. In addition, EURECA will prepare Europe for the future phases in the development of automated space vehicles.

At a later stage, an operation of this kind could be planned for this module, but there is no evidence at this time that such a project, which would be a very costly one, can be justified by the scientific and technical results it could be expected to yield.

A more interesting project might be, to the extent they might be developed by others, the docking of platforms or modules to power unit platforms [PUP's] that would remain constantly in orbit and that would furnish energy to successive payloads docking up to it. It is doubtful, however, that a single free-flying module could be made to suffice for permanent human living in orbit, since it would be a matter of not only working within the module but also of living in it.

This is why sights must be set farther ahead on orbital stations, whether manned, automated, or capable of operating in both modes.

Europe's philosophy has not been defined in this domain, and the studies we are presently undertaking should enable us to discern the goals of European cooperation, its scientific and technical interest, the gaps in the domain that it could bridge, and to some extent, and assuming they will be determined in turn by an orbital-station policy, the programs to be developed during the 1985-1995 period. Should the Europeans hurl themselves into the manned-space battle, where strong positions have already been taken by the United States and the USSR? Should they play the automation and robotics field, less explored to date and open to interesting developments? Will the development of orbital stations be based essentially, indeed solely, on low orbits, or is interest likely to appear soon in orbital stations (particularly telecommunications stations) in geostationary orbit, probably manned, but which will have to be assembled in orbit, repaired and maintained using automated methods?

Should the Europeans pursue, as they did for Ariane, a policy of complete independence, which has been a highly successful one in the domain of launchers, or should they accept certain invitations, particularly from the United States to join American stations, wherein elements derived especially from Spacelab modules and equipment platforms could be used to excellent advantage?

Can Europe play on several game boards simultaneously, or must it absolutely make a choice?

Space applications to commercial ends are clearly the prime movers of development with regard to transportation systems; Ariane is a success because the market for which it is intended, that of telecommunications satellites, has proven to be in continued growth, and because Ariane was specifically designed to perform this type of mission. The prospects that have been generated by initial experiments in the fabrication and processing of materials in space, should they materialize, could markedly characterize the development of European transport systems, owing to the need to provide low-orbit transport facilities, and low-cost ones in this case, and to return the finished products to Earth. Low-orbit traffic could, in this case, equal or exceed geostationary-orbit demand. This possibility, which is difficult to evaluate today, could bear heavily on the design of the orbital transport systems of tomorrow. And in this case, the role of space stations appears predominant and human intervention essential, at least during the developmental phases of processing and manufacturing methods. Moreover, low-orbit transportation costs, human intervention capability and the returning of products to Earth under economically viable conditions could be the three determinative characteristics of the orbital transport systems Europe should count on for the long term. A space station, such as NASA has in mind for the space shuttle, is a coherent system that would enable the carrying out of these functions. Other solutions can be sought having more limited capacities but capable of gaining for Europe the autonomy that will be indispensable as commercial prospects materialize. Other intermediate courses also exist, which Europe must explore.

The extent to which the United States plans to open up the future space station program to international cooperation and the terms and conditions that must be met by the participants in any such program, as regards use of the station, will, of course, be important considerations in the choice the Europeans will have to make beyond Spacelab and Ariane.

Does the advent of the space shuttle not usher in services other than that of mere orbital transportation? Inspections and interventions in orbit, and, in short, orbital operations, could, in time, take on considerable importance. This is why the ESA is studying an orbital infrastructure design that could gradually provide Europe with facilities other than those of transport alone. Although the types of functions that could be provided by such an infrastructure can be foreseen, the degree of autonomy and the economic advantages of these systems have yet to be determined. From the technical standpoint, it is clear that programs such as EURECA must provide the basis of such an orbital infrastructure.

These questions concerning the European space transport systems of the future are highly important and very difficult ones. The choices involved cannot be made, at the risk of making grave, probably irreparable, mistakes, without having acquired a sufficient foothold in the technical and economic domains. This is why Europe has decided to make a considerable effort in the domain of prospective studies, accompanied by certain Phase A studies. All approaches must be studied during the years 1982, 1983 and 1984, to bring to the policy decision a solid foundation on which a sound choice can be made. In any case, the know-how Europe and its industry have gained through the development of Ariane and Spacelab must be put to use to ensure our having a solid orbital infrastructure by 1995 that will permit us to address, in a fitting manner, the space missions of the 21st century.

9399
CSO: 5500/2516

SPOT IMAGE'S STOCKHOLDERS, SHARES LISTED

Paris L'AERONAUTIQUE ET L'ASTRONAUTIQUE in French No 95, 1982 pp 22

[Article by Gerard Brachet, chief executive officer of SPOT IMAGE: "Earth Observation: Development of Requirements and Systems."]

[Excerpts] The SPOT [Earth Observation Probe System] satellite will be launched in October 1984 by an Ariane rocket from the Kourou base. A description of this program was given in L'AERONAUTIQUE ET L'ASTRONAUTIQUE, No. 89. Besides the technological innovations to be offered by the satellite, and in view of the economic potentials being revealed, on the one hand, by the growing use of space data facilities in many sectors of activities and, on the other hand, by different market studies currently under way, France has decided to turn the distribution of the data over to a commercial firm that has been given the name SPOT IMAGE, a corporation capitalized at 25 million francs, shared by several French, Belgian and Swedish government bodies and industrial firms. SPOT IMAGE will be located at Toulouse, where the data receiving station will also be located.

SPOT IMAGE will perform the following technical functions:

--Reproduction of data coming from the CRIS [Space Image Rectification Center] (films and magnetic tapes);

--Manufacture of value-added products (products and services);

--File storage and commercial functions:

--Advertising;

--Reports to users;

--Market surveys;

--Marketing (distribution, sales).

SPOT IMAGE Stockholders:

CNES [National Center for Space Studies]	34	percent
BRGM [Bureau of Geological and Mining Exploration]	10	"
IFP [French Petroleum Institute]	10	"
IGN [National Geographic Institute]	10	"
MATRA [Mechanics, Aviation and Traction Company]	7.50	"
SEP [European Propulsion Company]	7.50	"
SSC [Swedish Space Corporation]	6	"
Participation Belge [Belgian Participation]	4	"
IRDI [Regional Industrial Development Institute]	1.20	"
Banque Nationale de Paris	1.20	"
Credit Lyonnais	1.20	"
Banque de Paris et des Pays-Bas	1.20	"
Societe Generale	1.20	"

9399
CSO: 5500/2515

PAYLOAD OF ERS-1 TO INCLUDE HYPERFREQUENCY DETECTOR

Paris L'AERONAUTIQUE ET L'ASTRONAUTIQUE in French No 95, 1982 p 24

[Article by Gerard Brachet, chief executive officer of SPOT IMAGE: "Earth Observation: Development of Requirements and Systems"]

[Excerpt] ERS-1

On 15 May 1982, the ESA's [European Space Agency's] ERS-1 program entered its system definition phase (Phase B). The final equipment actualization phase (Phase C/D) will begin around year-end 1983.

The principal objective of the ERS-1 program is to provide Europe with the capability to participate in the management of Earth's resources and in the surveillance of its environment. In particular, the program is designed to process, develop and exploit applications of remote-sensing data in the coastal, oceanic and glacial zones.

The satellite's nominal payload includes:

--An active hyperfrequency detector (AMI [expansion unknown]) combining the functions of an SAR [synthetic-aperture radar], a "waves" diffusiometer, and a "winds" diffusiometer, and designed to measure wind fields and the waves spectrum, as well as to do all-weather imaging over coastal zones, oceans, ice formations, and emergent land elements;

--An RA [radar altimeter] to measure the significant height of waves and to furnish quantitative data on ice formations and major oceanic currents;

--Laser retroreflectors for precision ground-based tracking;

--Ground-trace scanning radiometer (ATSR [expansion unknown]). This is a 3-channel infrared radiometer for precision measurements of ocean-surface temperatures;

This payload will be space-borne by a platform whose design is based on another model of the multiple-mission platform developed under the French SPOT [Earth Observation Probe System] program.

ERS-1 will provide a worldwide coverage compatible with the operating cycles of the instruments in its payload. To this effect, it will be able, on the one hand, to communicate directly with ground stations and, on the other hand, to record on-board the data it gathers from any part of the world, except insofar as concerns the SAR, which, because of its high data bit rate, will be limited to real-time transmissions. The ground segment will be organized so that certain ERS-1 data can be processed and delivered in quasi-real time (3 to 6 hours) to those users interested in the monitoring of rapidly evolving dynamic phenomena.

The scientific results expected from this mission will be of utmost interest to researchers in the fields of physical oceanography, glaciology and climatology. The mission should also bring about an improvement in short- and medium-range forecasting of meteorological conditions and of oceanic conditions, interest in which is of paramount importance not only from the standpoint of maritime transport activity but also from that of the planning and operation of sea-based industrial complexes and particularly offshore oil drilling platforms. Surveillance of floating ice formations and icebergs will contribute also to increasing the safety of maritime transportation and of offshore oil production activities in the far northern latitudes.

ERS-1 is slated to be put into a circular sun-synchronous orbit at an altitude of around 700 km, by Ariane 2 or 3, around year-end 1987. The estimated life of the satellite is 3 years.

ERS-1 will be at one and the same time an experimental and preoperational system, the ultimate purpose of which will be to pave the way for a fully operational multi-satellite system in the 1990's.

9399
CSO: 5500/2515

EUROPEAN PROSPECTS FOR LAUNCHER PROPULSION DEVELOPMENT

Paris L'AERONAUTIQUE ET L'ASTRONAUTIQUE in French No 95, 1982 pp 74-75

[Article by Jean Dardare, technical director for the European Propulsion Company: "Prospects in the Field of Launcher Propulsion"]

[Excerpts] European Prospects

In Europe, France supports approximately two-thirds of the launcher propulsion developmental effort. Our financial resources are obviously much more limited than those of the United States and our technological level less advanced. Ariane's two engines, the Viking and the HM7, whose designs date back to 1966 and 1962 respectively, will be the only ones available until and including Ariane 4, and will still be used for Ariane 5, whose first flight is being targeted for 1992 and hence will probably take place about the year 2000.

For its primary mission--15 tons of payload in low orbit--Ariane 5, a two-stage rocket, will use the first stage of Ariane 4 and a new second stage, a cryogenic one propelled by a liquid-oxygen-liquid-hydrogen engine having a thrust of 90 tons in a vacuum, which has been baptized the HM60. Its combustion pressure will be relatively high, 100 bars; its specific impulse in a vacuum, 445 seconds. It will operate in accordance with the conventional gas generator cycle, and will be designed to provide 6,000 seconds of operation and 50 starts. Its development will commence in 1984 after a 3-year technological program, and be completed upon qualification by the end of 1991. Its characteristics have been chosen on a rather conservative basis, particularly its cycle, so as to limit cost and duration of development but also, and above all, relative contingencies.

For transfer to geostationary orbit, which, in the case of Ariane 5, can be accomplished by a third stage, the HM7 will have to be improved, making possible its refiring, and increasing its operational life, its reliability and its performance parameters.

The next phase, being targeted toward the end of the 1990's, is harder to define without knowing the missions it will be expected to accomplish. It is possible, however, to imagine a retrievable and reusable vehicle, at least as regards its first stage, by way of soft landing if possible, undoubtedly capable of being manned, at least for low-orbit launchings, and having a low-orbit payload capacity of 30 to 50 tons.

The HM60 will evidently be used for the second stage and the improved HM7 for orbit transfer. Remaining then will be the problem of propulsion of the first stage. The Viking will have to be abandoned, being, as it will be by then, of outdated technology, and of inadequate thrust and performance parameters. Two solutions will then be available: Either use a new liquid-oxygen-hydrocarbon engine that will have to be developed, or use a version of the HM60 adapted to this use and with augmented thrust. The choice between these two solutions will have to be the result of a detailed economic study that will require knowledge of the missions; the outcome of this study may be different from that of the studies carried out in the United States, taking into account smaller annual payload totals. If the choice calls for the first stage to be oxygen-hydrogen propelled, a solution that would have the advantage of not requiring the development of an entirely new engine, it will undoubtedly be found that the present choice of the HM60, and especially its cycle, was not the best. A stepped combustion cycle would have given it a much greater thrust augmentation potential with much better performance parameters, particularly on the ground.

It would seem, in view of our present technological level and available means, that any thought of preparing to develop a single-stage launcher in the period being considered must be excluded, and hence that it is useless to weigh the merits of a dual-fuel engine.

The foregoing considerations bear out that the present choice of the HM60 engine cycle is justified by the available technological level in Europe, the result of the absence of a technologies research and development program during the development of Ariane 1, but also that this choice can very heavily penalize the future of this engine, by limiting, as it does, the performance parameters, flexibility of use and thrust augmentation potential that, unfortunately, are so highly desirable in the current uncertainty as to future missions to be provided for. The lesson to be drawn from this is the absolute necessity of implementing, concurrently with the development of engines, research and development programs on technologies, with the aim of constantly improving basic knowledge and current technologies, for use in future generations of engines. This is a profitable investment since, without it, the technological gap will widen, bringing about an unfavorable situation from the standpoint of competitiveness, lengthening the time needed for the development of new engines and making it more costly. The Americans, for example, attribute the delays and the costly malfunctions experienced in the developmental program on the shuttle's main engine to the fact that, to gain time, the overall engine system project was implemented before completion of the research and development programs on the pumps, turbines and other principal components. This explanation is fully corroborated by our own experience in developing the HM60 engine and the third stage of Ariane.

9399
CSO: 5500/2516

BRIEFS

CHITTAGONG PHONE EXCHANGES--Chittagong Nov 9--The Telephones and Telegraphs Department have set up two new telephone exchanges and improved nine other existing exchanges at upgraded thana headquarters under Chittagong Telecommunications Region. According to Chittagong telecommunication region office these exchanges one cach at eleven upgraded thanas have gone into functioning from Sunday. The exchanges are in Chittagong Chittagong Hill tracts Bandarban Sylhet Noakhah and Comilla districts. The new exchanges set up at upgraded Langdu thana of Chittagong Hill tracts and at Balagon of Sylhet district have the capacity of 30 lines each. In Chittagong district the capacity of Sandwip exchange increased to 100 lines from 30 lines Fatiksari exchange to 50 lines from 30 and Chokoria exchange to 70 lines from 50. The exchange at upgraded Naikhongsari thana of Bandarban district raised to 50 lines from ten lines. Similarly Sonagazi exchange of Noakhali district is being added with 40 new lines raising the capacity to 70. In Comilla district the capacity of Matlabgonj exchange increased to 70 lines from 30 and Sarail exchange to 30 lnes from 16. Gopalgonj and Chhatak exchanges of Sylhet district have now the capacity of 50 lines and 200 lines respectively. [Text] [Dhaka THE BANGLADESH OBSERVER in English 10 Nov 82 p 7]

CSO: 5500/7039

ARGENTINA

BRIEFS

NEW SATELLITE GROUND STATION--The general manager of the National Telecommunications Company has reported that the new satellite ground station at Bosque Alegre, Cordoba Province, will start operations during the first 3 months of 1983. He said the Bosque Alegrestation will be used for international communications for Cordoba and other northern Argentine cities and that it will reduce traffic through the Balcarce plant. [PY280236 Buenos Aires Domestic Service in Spanish 1030 GMT 24 Nov 82]

TV CHANNEL CONCESSION--The Empresa Vizental and Associates has been granted a concession to install a television channel in Parana. [PY280236 Buenos Aires DYN in Spanish 1738 GMT 11 Nov 82]

RADIO STATION CONCESSION--The Empresa Radiodifusora Nordeste has been granted a concession for a radio station to be installed in the city of Resistencia. The station will have 25 kw and broadcast on 101.5 mHz. [PY280236 Buenos Aires TELAM in Spanish 1530 GMT 18 Nov 82]

TV, RADIO STATION LICENSES--The executive branch has approved an operation license for LV 85-TV channel 6 in San Rafael, Mendoza and has renewed licenses for LW8 Radio San Salvador of Jujuy and LW80-TV channel 7 in the capital of Jujuy. [PY280236 Buenos Aires TELAM in Spanish 1325 GMT 2 Dec 82]

RADIO LICENSES RENEWED--President Bignone has renewed licenses for 15 years to the following radio stations: LT22 Pehuajo Radio Nueva Era; LT27 Villaguay Radio La Voz del Montiel; LT29 Venado Tuerto Radio Venado Tuerto; LT37 Rufino Emisora Rufino; LT39 Victoria, Entre Rios, Emisora Victoria; LT40 La Paz, Entre Rios, Radio la Voz de las Paz; LT41 Gualeguaychu Radio la Voz del Sur Entreriano; LU10 Azul Radio Azul; LU16 Villa Regina Radio Rio Negro; and LW8 Libertador General San Martin, Jujuy, Radio Libertador General San Martin; and for 20 years the following radion stations: LU12 Rio Gallegos Radio Rio Gallegos, LU17 Puerto Madryn Radio Golfo Nuevo and LW4 San Ramon de la Nueva Oran, Salta, Radio Oran. (PY280236 Buenos Aires DYN in Spanish 1540 GMT 2 Dec 82]

CSO: 5500/2020

FRENCH AID TO ENABLE CONSTRUCTION OF EXCHANGES IN NORTH

Port Louis LE MAURICIEN in French 30 Oct 82 pp 1, 4

[Text] A delegation of the National Economic Cooperation Fund (CCCE) and the Mauritian Government will sign on Tuesday an agreement for Fr30 million in aid to install exchanges to improve telephone communications in the north of the island. Since the aid had already been approved in principle by the National Fund, the government has only been waiting for the signing. Bids will be solicited for the civil engineering work. In view of its high cost, the project will be carried out in two phases.

The first phase will cover telephone service between Port-Louis and Cap Malheureux, which includes the areas of Triolet, Grand Baie, Choisy and Pereybere. The microwave infrastructure installed in the north last year will help considerably in improving the quality of communications with that part of the island. Work will get underway at the beginning of next year and last 18 months.

This project, which will be the responsibility of SOFRECOM, a French semi-governmental organization, is separate from the regular work done by the telecommunications service which installs about 2,000 new lines a year. Since development in the outlying areas is proceeding fairly rapidly, the telecommunications service is already planning construction of an additional exchange at Port-Louis/North, alongside the Plaine Verte, with a capacity of 10,000 lines in case the new exchanges to be constructed next year reach capacity sooner than expected. This second phase will coincide with increasing capacity of the Rose-Hill and Floreal exchanges, each with 5,000 additional lines.

The Aid and Cooperation Fund (FAC) has agreed to help train Mauritian staff and technicians. Three inspectors of the telecommunications service who have undergone a period of training in France have returned in anticipation of the SOFRECOM project. FAC will also send three experts to train on the spot additional Mauritians to oversee smooth operation of the new exchanges.

The exchanges in the north will be equipped with French equipment of the E-10 trademark produced by the French company CIT-ALCATEL. This equipment is among the best in Europe. The system to be used in the exchanges is called a "temporal system" and is among the most sophisticated in the world.

It makes it possible to code the voice into impulses, preventing anyone along the route from understanding an intercepted telephone conversation. This is the system currently used between Mauritius and Europe. The purpose in turning to such sophisticated systems is that telecommunications advances are made so quickly that old systems become obsolete and are abandoned. The electro-mechanical system used in Mauritius until recently has been dropped completely in developed countries.

It is expected that these projects soon to be started will make it possible in 4 years to eliminate the long waiting list of applicants for service. Thus, major investment is necessary so the telecommunications service can make up for the delay accumulated over the past few years.

9920
CSO: 5500/33

BRIEFS

NEW AUTOMATIC EXCHANGE--Beira--A new automatic telephone exchange, with 100 inside and 10 outside lines, was recently acquired by Acucareira do Buzi from Central Automatica Portuguesa, at a cost of about 1,200 contos. The modern telephone system was acquired, on one hand, because of the inadequacy of the old system, which had 50 inside lines, and also because of the size of the company, which encompasses a whole agroindustrial complex and a residential village. Putting the new equipment in place required construction of a building, annexed to the company offices, as well as installation of the respective telephones, which were installed by specialists of the firm from which the system was purchased, with the assistance of workers in this important strategic production unit. Acacio Correia, chief of the electrical department told DIARIO DE MOCAMBIQUE that one of the noteworthy advantages of the equipment is the possibility of direct calls to the city of Beira and from there to every part of the country and the world. Four individuals can make simultaneous calls from Buzi to Beira and vice versa. The exchange is functioning only within the complex, pending acquisition of two radio transmitters to be set up in Beira and in Buzi, through which outside calls will be possible. "The entire line is laid underground, and we feel we will not have any major problems in this area for 10 years, approximately," Correia assured. Meanwhile a technical-professional training course in basic electricity ended about 2 weeks ago. Company employees attended the course, which was taught by more experienced professionals. [Text] [Beira DIARIO DE MOCAMBIQUE in Portuguese 21 Oct 82 p 3] 6362

CSO: 5500/43

BRIEFS

TELEVISION CHANNELS TO SPLIT--The public relations department of the SABC [South African Broadcasting Corporation] announced yesterday that TV-2 and TV-3, which presently share the same channel, would each be given its own channel beginning on 31 December at 2130. TV-2 will serve Cape Town, Port Elizabeth, East London, Durban, the Maritzburg area, Glencoe, Davel, Middleburg, Johannesburg and Pretoria. TV-3 will serve Bloemfontein Kimberley, Theunissen, Kroonstad, Hartbeesfontein, Welverdiend and Potgietersrus as well as Johannesburg and Pretoria. [MB070949 Johannesburg THE CITIZEN in English 3 Dec 82 p 1]

CSO: 5500/59

BRIEFS

SBS-2--Broadcasting Service is busily preparing for its second channel--SBS-2--set to begin broadcasting early next year. Director of SBS Mr J.B.S. Vilakati, said yesterday the construction of the new station at Sidvokodvo was nearing completion. Mr Vilakati said SBS-2 which will broadcast in siSwati, will have one big station and no booster stations. SBS-1 has six booster stations. Mr Vilakati said new equipment from the United States had arrived in Durban and are to be transported to Sidvokodvo to be stored until the building is completed. SBS's chief engineer Mr Sydney Black recently returned from the United States where he tested and purchased equipment for the new station. The new equipment which has arrived in Durban includes insulators. "Most of the equipment which will be needed for the station has already been purchased," Mr Vilakati said. SBS-1 will broadcast in English and will give more time to schools and other educational programmes. "However, broadcasting in two channels and two languages will not be easy in view of the current lack of skilled manpower," Mr Vilakati said. This will involve an intensive on-the-job training programme," he said. "Building may be easy, but it may not be so easy to find suitable personnel," he said. SBS curenntly covers about 90 percent of the country. However, in some areas, such as Nyamane and Makhosini, SBS broadcats are not heard very clearly. Mr Vilakati said there is an ongoing survey to identify all the areas where SBS broadcasts are not clear with a view to improving the situation. "In areas where our transmission is not clear we will install low transmitters," Mr Vilakati said. SBS-2 will concentrate on siSwati cultural programmes. These will include siSwati music, literature and traditional story telling. [Text] [Mbabane THE TIMES OF SWAZILAND in English 12 Nov 82 pp 1, 20]

CSO: 5500/53

JOINING ECS PROJECT SEEN SPEEDING UP A NORDIC TV SATELLITE

Norway Expresses Interest

Stockholm DAGENS NYHETER in Swedish 2 Nov 82 p 16

/Article by Anders Mellbourn: "Satellite Could Result in Cable TV"/

/Text/ The development of cable television in Sweden as well as the future cooperation on a Nordic TV satellite would be speeded up if the Nordic countries were to join the ECS project.

The Telecommunications Agency in Sweden recently informed the Ministry of Education about the Norwegian initiatives for accelerated Nordic TV cooperation on the European Communication Satellite, ECS. But no direct comments are as yet to be had from official circles in Sweden.

In its Tuesday issue (2 Nov) DAGENS NYHETER was able to report that in the satellite group of the Nordic Cultural Secretariat Norway presented the idea of a Nordic channel on the ECS, which according to plans is to be launched and in operation as early as next fall.

The Swedish authorities involved are extremely reticent and emphasize that everything is still very unclear.

Ministerial Meeting

But representatives of the Swedish Telecommunications Agency participate continuously in the European satellite discussions. And according to what DAGENS NYHETER has learned, the project should be included on the agenda when the Nordic ministers of culture next meet on 15 November.

At the same time plans for Tele-X and the Nordsat projects are continuing. The Swedish Ministry of Industry and the Space Corporation are pressuring the Norwegians in order to obtain Norwegian agreement to Tele-X. So far only Sweden has committed itself to Tele-X, but Finland as well has contributed money for the development. If Norway says yes, Finland is also likely to participate fully.

Nordic participation in the ECS project would be interesting primarily from two points of view.

First, it could become an initial phase for Tele-X and later on for Nordsat. Since ECS is expected to function as early as next fall, work on the program could get under way considerably earlier than 1985-86, when Tele-X is to be launched.

Second, the ECS would probably speed up cable television tests in Sweden. The ECS requires special, powerful receivers which in practice exist only for the cable television networks. The cable TV experiments which will be made next year in Lund are based on the ability to receive three foreign television programs, from Denmark, the FRG and the GDR. With the ECS the number of programs would grow to nearly 10, and tests could be made all over the country.

Could Affect Sweden's Tele-X, Nordsat

Stockholm DAGENS NYHETER in Swedish 4 Nov 82 p 20

/Article by Bjorn Lindahl: "Satellite in 1 Year"/

/Text/ Oslo, Monday--A dozen European television channels and one Nordic channel, that is what television viewers in the Nordic countries could be offered as early as next fall, if a Norwegian initiative goes through. The Norwegian Telecommunications Agency has expressed interest in participating in a European telecommunications satellite, ECS, which will be launched with a French rocket and which has a number of television channels for lease.

The satellite is of a different type than the one in question when Nordsat was discussed. It is not possible for a single household to receive the programs with a simple parabolic antenna, but bigger receivers are required.

If the number of cable celevision networks and the households which are connected to central antennas are calculated, however, it would be possible to reach 60 percent of the households in the Nordic countries, according to estimates.

The Norwegian Telecommunications Agency, together with a large number of commercial enterprises, has shown an interest in the satellite.

"Norway has presented the idea of a Nordic channel to the satellite group of the Nordic Cultural Secretariat in Copenhagen, but the Norwegian Telecommunications Agency still has not committed itself to participating in the satellite project," says Kare Solbakken at the Norwegian Telecommunications directorate.

Encouraged

Norway was the country which most strongly encouraged the Nordsat project. Since the Conservative Party came to power some of the households have also been granted the license to receive broadcasts from a British television company via the so-called OTS /expansion unknown/ satellite.

But in Denmark as well attitudes are changing at the same rate as the non-socialist parties are beginning to feel at home in the ministries. A change in legislation is in the making, so that Danes may also view British satellite television.

The ECS satellite will have a lifetime of 7 years, and the cost of leasing a channel would be about 10 million kronor.

11949
CSO: 5500/2539

DANISH TV TEXT TRANSMISSION BEGINNING IN MARCH 1983

Copenhagen BERLINGSKE TIDENDE in Danish 6 Nov 82 p 7

[Article by LI-Z: "Danish TV to Be Captioned as of March"]

[Text] On 1 March Danish television will take a small step in the direction of people's being able to decide themselves whether they will have captioned TV broadcasts. In the first round it is a question of broadcasting captioned TV in two weekly broadcasts of 30 to 40 minutes. In addition to this 60 "pages" of information will be broadcast with news, weather forecasts and program summaries which people can themselves tune into at any time during the entire broadcast time.

1500 to 200 [as published] Kroner More

Radio Denmark has run captioned TV tests since the end of 1977 and had excellent results. However it can be difficult to receive captioned TV in inner Copenhagen because of ghosts from high buildings. The test broadcasts were transmitted by means of old equipment, but in January Radio Denmark will receive new equipment which will be ready to put into service by March 1983.

It is not possible to receive captioned TV just like that. The TV set must be furnished with a so-called decoder which costs something under 2000 kroner. But this decoder can be installed only in TV sets which have been made ready for captioned TV in advance at the factory. Prepared sets of this sort have been on the market the last couple of years. Now it is also possible to buy sets which have been furnished at the factory with a built-in decoder. A set of this sort is about 1500 kroner more expensive than a set without a built-in decoder.

Old sets which have not been prepared for captioned TV will be quite ridiculously expensive to convert for reception of captioned TV.

So for the time being it can be said that captioned TV is only for those specially interested.

Everything Captioned in Four Years

Over the next four years Radio Denmark hopes to reach the point where all of its own productions which are not direct are supplied with captions for the benefit of the hearing impaired.

Others can simply do without converting to captioned TV and avoid being distracted by captions at the bottom of the picture.

8985

CSO: 5500/2542

DENMARK

COMMERCIAL SATELLITE TV SEEN ECONOMICALLY FEASIBLE BY 1986

Copenhagen BERLINGSKE TIDENDE in Danish 6 Nov 82 p 3

[Article by Møl.: "Danish Television from Satellite in '86"]

[Text] "The legal and technical possibilities for Denmark's getting an advertising-financed TV satellite channel have been studied and are in order. This will be able to take place in 1986-87. The economic basis for such a program is to be studied by the Danish Advertisers Association and the Danish Advertising Bureaus Trade Association. This is occurring now through market research," says cand. jur. [Bachelor of Laws] Anders Torbøl, who has taken the initiative for Denmark to have satellite TV.

He is vice-general-secretary of the conservative group in the European Parliament and has, among other things, negotiated with Radio Luxembourg regarding Denmark's getting a channel in the satellite Radio Luxembourg will send up in 1986.

This satellite will be able to cover all of Denmark and southern Sweden and, by means of a strong parabolic reflector set up in Oslo, southern Norway also. For this reason Anders Torbøl believes that there can perhaps be a basis for an advertising-financed "Nordsat" [Scandinavian satellite].

Director Werner Mårtenson of the Danish Advertisers Association reports that on Monday a meeting will be held in a work group in which division of the market research work assignments will be delegated out.

A study program has been received from Radio Luxembourg, which Radio Luxembourg has used in other countries when a study is to be made in a country of the demand and economics.

The idea is to find out how many have TV, how long people watch television, how much cable TV there is, how many common antennas exist and how many foreign programs can be seen. In addition, it must be known how much advertising money is to be used. The latest study has shown that in Denmark it is a question of 4 billion kroner per year.

Director Børge O. Madsen of the Danish Advertising Bureaus Trade Association says that his association will prefer a purely Danish advertising-financed TV 2 [Channel 2]. Secondarily, a satellite program in Danish with commercials controlled by Danes.

"We are in a situation in which a number of TV satellites are being sent up and if we do not react ourselves we risk that there will be a number of international satellite services which come to dominate and thereby pull the advertising kroner from Denmark to centers in Geneva, London and New York."

"On the other hand there is also nothing preventing a Danish advertising-financed TV 2's being able to broadcast besides a Danish-controlled Luxembourg channel, for example. Therefore, we went along with this project," says Børge O. Madsen. "Who will then come in and manage we must find out when the studies and negotiations in Luxembourg regarding a Danish channel have come a little further along," he says and points out that the interested parties could be the Danish Dailies Association and the Danish Magazine Publishers Association.

8985
CSO: 5500/2542

PTT MINISTER URGES TECHNOLOGY TRANSFER AT ITU MEETING

Paris ELECTRONIQUE ACTUALITES in French 15 Oct 82 pp 1, 8

[Article by D. Levy]

[Text] Nairobi. The first part of the conference of ministers of the ITU [International Telecommunications Union], which will continue in Nairobi, Kenya, until 5 November, included the election of Mr Butler of Australia to the post of secretary general of the ITU, replacing Mr Mili. Mr Mexandeau, the minister of the French PTT [Postal and Telecommunications Service], and the leader of a large French delegation, gave a speech to the conference on 6 October, in which he pointed out the contributions made by France to international cooperation in the field of telecommunications, "both within the multilateral context of the ITU and in the framework of bilateral actions." He added, though, that "assistance programs and multilateral cooperation must not lead us to forget the fundamental activity of standardization."

Attracted by the conference, which has brought together nearly 1,000 delegates representing 147 member nations of the ITU, the major French telecommunications industries, along with their foreign counterparts, have come to Nairobi to take advantage of the presence of PTT officials from all over the world.

The conference of ministers is the supreme authority of the ITU. It establishes the general principles to be followed by the ITU in order to "maintain and extend international cooperation for the improvement and rational use of telecommunications of all sorts and to favor the development of technical resources and their most effective use in order to improve the efficiency of telecommunications services, to increase their use, and provide the public with greater access to such services," states the report of the administrative council, while listing the activities of all the organizations of the ITU since the last conference of ministers was held in 1973. The conference also prepares the foundations for the ITU's budget and sets the ceiling for spending until the next conference, in addition to conducting elections.

After the committee work which is going on now, resolutions will be submitted in plenary sessions during the last week of the conference. However, outside of any possible directives which might lead indirectly to telecommunications programs, the major interest in this conference for industry lies in the contacts which can be made with PTT officials from all over the world who are meeting in Nairobi.

Mr Butler's Election

The Nairobi conference began in a strained atmosphere, somewhat reminiscent of a U.N. General Assembly session. (The ITU is the UN's specialized institution for telecommunications). The tension was caused by the intrigues surrounding the election of the new secretary general, and by an attempt to bring politics into the organization. Right away an Algerian resolution was introduced calling for the expulsion of Israel from the ITU. The United States, followed by the EEC members, then threatened to withdraw from the organization, and the Africans became incensed about seeing "their" conference being sabotaged. (This is the first time that the ITU's conference of ministers has met in Africa). The Algerian delegate then agreed to have his resolution debated "later."

After that, some observers wondered about the possibility of a split in the ITU. Others commented that no matter what happened, such an international organization is essential, if only to handle frequency allocations.

The election of the secretary general quickly became a duel between Messrs Mili, the present secretary general, and Butler, now vice secretary general. Mr Butler, who was supported by France, won in the second round of ballotting by 74 votes (of 131 cast). Mr Mili's defeat was caused, according to most of the observers, by the fact that he had been in office so long. He was elected secretary general in 1973, but had actually been doing the job since 1967. Mr Jipguep of Cameroon was elected vice secretary general of the ITU.

The other major event of the first part of the Nairobi Conference was Mr Mexandeau's 6 October speech. After speaking of the considerable development of telephone service in

France (with an increase from 4 million lines in 1970 to nearly 20 million in 1982) and the use of new technology (such as time-switching, digital transmission, computer communications, the use of optical fibers) the PTT minister said that "France is one of the world's biggest supporters of international cooperation, both within the ITU and in a bilateral context as well." He pointed out that the number of telecommunications specialists sent on missions abroad increased from 480 in 1981 to over 500 in 1982 (of these, 99 were on ITU missions). This number will probably reach 600 in 1983. In addition, France took in nearly 600 foreign trainees in 1981 (99 came as part of an ITU program).

Standardization Comes First

However, Mr Mexandeau emphasized that "technical assistance and multilateral cooperation must not lead us to forget the essential activity of standardization. Through the CCITT [International Consultative Committee on Telephone and Telegraph] and the CCIR [Interregional Consultative Committee on Radiotelegraph] we provide the technical bases, not only for handling traffic between countries, but also and above all, for ensuring compatibility between the equipment used, so that a variety of suppliers can compete. If we want--and we certainly do--to enable all the nations of the world to control their own technical and technological decisions, it is clear that we must start through this work of standardization within the ITU. So it is quite understandable that the question of the share to be allocated to technical cooperation in the ITU's budget may be a problem, for it must not be allowed to cause cutbacks in the Union's traditional activities." Then Mr Mexandeau invited the conference to hold its 1987 meeting in Paris.

During the press conference he held in Nairobi, Mr Mexandeau returned to the issue of cooperation in telecommunications. He spoke in favor of a true technology transfer and as an example, cited the contract signed between India and France for the order of "E-10" exchanges, which include a technology transfer and the construction of a manufacturing plant in India. He again gave his support to multilateral cooperation within the ITU and also to bilateral cooperation programs.

Then, in response to an African journalist who remarked that French telecommunications aid is more accessible to French-speaking than to English-speaking countries, Mr Mexandeau said that "because of these historic ties, France first concentrated its efforts on its former colonies. We are going to continue to help the French-speaking countries, but there will also be something new: our cooperation is now being offered to all countries." He again mentioned the agreement with India, as an example of this new orientation.

7679
CSO: 5500/2521

TELECOMMUNICATIONS CHIEF TALKS AT FIBER OPTICS MEETING

Paris ZERO UN INFORMATIQUE HEBDO in French 4 Oct 82 p 30

[Article by Daniel Mansion]

[Excerpts] The eighth European Conference on Optical Communications (ECOC 82) was held in Cannes from 21 to 24 September 1982 in the new Palace of Festivals. This conference was organized by the SEER [Society of Electrical, Electronic, and Radio Engineers] and by the GIEL [Electronic Industries Group]. The conference attracted over 800 participants, including 500 foreigners representing 28 countries.

ECOC is the biggest conference in the world on research and industrial development in the use of optical fibers for communications. This topic is of direct interest to data specialists because of the very high baud rates possible (560 Mbps [million bits per second]).

The conference was opened by Jacques Dondoux, the director general of telecommunications. Just the day before he had attended the launch of a cable-laying ship equipped to lay three types of cable: energy cables, copper telecommunications cables, and optical fiber cables.

Mr Dondoux remarked that on 15 September 1982, the "Ampere," the cable-laying ship which belongs to the PTT [Postal and Telecommunications Service], laid the first underwater optical cable without repeaters, from Cagnes-sur-Mer to Juan-les-Pins, making a loop 20 km offshore in order to find a seabed over 1,000 meters in depth.

The cable operates on a wavelength of 1300 nautical miles. Four of its six optical fibers are multimode fibers and are used to handle two bidirectional digital links, at a baud rate of 34 Mbps. The other two monomode fibers operate at a higher rate--280 Mbps.

Fournisseurs 1									
GROUPES 2	Noms 3	Fibres optiques 4	Câbles optiques 5	Composants 6	Systèmes de liaisons 7	Appareils de mesure 8	Recherche fondamentale 9	Machine à fabr. fibres 10	Nous avons remarqué 11
TCSF	Cabeltel		•		•				
CGE	Câbles de Lyon		•						
CGE	Labo Marcoussis							•	
CGE 12	CIT-Alcatel 13			•	•				Liaison expérimentale 560 Mb/s sur 2 km, monomode 0,3 μm. 20 Terminaux 34 Mbs Cagnes-Juan-les-Pins 21
CGE	CLTO	•	•	•	•				
	CNET 14							•	1re livraison sous-marine 22
	Cordons & Equip		•						
Schl.	Enertec					•			Largeur de bande, échométrie, rétrodiff. 23
G3S	Europtronique			•					Photodiodes pour 1,3 μm 24
TCSF	F.O.I.	•							
	Foptica		•						Câbles sous-marins 25
	Fort		•	•	•				
Instrum.	Jobin Yvon			•		•			Multiplexeur optique 26
TCSF	LTT 15		•	•	•			27	Liaison monomode 140 Mbs sur 25 km
	Radiall			•				28	Connecteur PFO Optoball, hte perform.
Philips	RTC 16			•				29	Lasers collimatés. Catalogue 57 pp
G3S	SAT 17		•	•	•	•		30	Codage pour TV couleurs numérique
	SEMY						•		
G3S	Silec		•						
TCSF	Socapex 18			•					
	Souriau			•					
TCSF	Labo Corbeville 19							•	

Key:

1. Suppliers
2. Groups
3. Names
4. Optical fibers
5. Optical cables
6. Components
7. Communications systems
8. Measurement equipment
9. Basic research
10. Fiber manufacturing machinery
11. Of special interest
12. General Electric Company
13. Marcoussis Laboratory
14. National Center for Telecommunications Studies
15. Telephone and Telegraph Line Company
16. Compelec Radio Technique
17. Telecommunications Corporation
18. Professional Electrical Connectors Company
19. Corbeville Laboratory

20. Experimental link at 560 Mb/s, 2 km in length, monomode 0.3 μm.
21. 34 Mbs terminals, Cagnes/Juan-les-Pins
22, First underwater delivery
23. Bandwidth, echo measurement, backscattering.
24. Photodiodes for 1.3 μm.
25. Underwater cables
26. Optical multiplexer
27. Monomode link, 140 Mbs, 25 km in length
28. PFO Optoball high performance connector
29. Collimated lasers. 57-page catalogue.
30. Digital coding for color television.

In 1983, an underwater cable 80 kilometers in length, with two repeaters, will be laid between Antibes and Port-Grimaud, and in 1985, commercial service will begin between La Seyne and Corsica.

Nor has land service been overlooked. In 1982 the PTT ordered 5,000 kilometers of optical cables. On the subject of the Biarritz experiment, the delay of several months over the original schedule was caused by the definition of the users' terminals.

Cables in France

At present, the manufacturers are delivering 30,000 "Minitel" terminals a month. They cost the PTT 1,100 francs each, and the PTT then rents them for 70 francs per month. Mr Dondoux said he hopes there will be no more than two suppliers for the electronic part of the equipment, as this would help to hold production costs down. However, the units are available in different colors and styles, like telephones, to meet the customers' tastes.

The PTT minister's report on this subject can not be released until it is submitted to the president, which will be in a few weeks. The prime objective of this cabling program, as of the Biarritz experiment, the prototype for the national program, is to help develop our optical cable accessories and components industry. While this urban cabling using optical fibers is slightly more expensive than when coaxial cables are used, the PTT may consider making up the difference in cost to the municipalities. This inducement should stimulate the development of cable television, which has been stagnating.

Mr Dondoux called for unity between government services and manufacturers in order to install optical fiber cables throughout the country. He commented that cabling cities can only be of interest to countries with a high standard of living. Such advanced technology can hardly be exported to the developing countries.

In 1986, there will be direct television broadcast satellites. They will broadcast five or six channels. The programs have not yet been selected. By 1990 we will have 10 channels on one or two French satellites, not to mention foreign satellites. In order to receive these broadcasts, collective antennas will have to be installed on buildings; this will represent a considerable market.

Another promising market is for mobile transmitter-receiver communications systems. There have been over 100,000 requests for permits, because of the longer distances traveled between home and work.

Telephone and computer communications services will be used in 95 percent of French households.

More and more, a need is being felt for a second telephone line, especially when the Videotex system is used. The PTT deliberately made their estimates on the basis of a single line per household, in order to be able to use optical fibers for the second line, for they can handle broader pass bands.

Mr Dondoux mentioned the budget, and said he would rather delay the renovation of old telephone exchanges in order to use the funds allocated for them to develop computer communications.

7679
CSO: 5500/2521

SINTRA ALCATEL TAKES LOAN, REVEALING INVESTMENTS, ACTIVITIES

Paris ELECTRONIQUE ACTUALITES in French 5 Nov 82 p 27

[Unsigned article: "Sintra Alcatel at a Turning Point"]

[Text] At times considered by the Bourse (French stock market) as a "little Matra," and at times as too highly valued, Sintra Alcatel either benefited or suffered from the mystery with which it surrounded itself. Very little was known about this subsidiary of the CGE (Compagnie Generale d'Electronique) group, by way of CGE and Cit-Alcatel.

It took the issuing of a loan consisting of obligations convertible into shares, for the company to lift the veil from such information as orders, investments, or sales structure.

A 120 Million Convertible Loan

This convertible loan was a success. It was extensively subscribed, and Cit-Alcatel covered only about one-sixth of the 120 million issue. Since the 240,000 convertible obligations of 500 francs each are exchangeable one-to-one against Sintra shares, and since 551,483 shares currently exist, it means that Cit-Alcatel's participation should drop from the present 69.9 percent to about 54 percent. But this adjustment will occur only in 1990, at the final due date of the convertible loan.

To understand the bonds between Sintra and its parent company, as well as the nature of its activities, it is appropriate to provide a little history. In 1978 and 1980, the company received a number of contributions from Cit-Alcatel and CGE. These were the submarine detection and electronics divisions of Cit, the latter division being involved in radio communications, graphic display systems, and remote measurements; Sintra thus became the pivot of CGE's military activities.

At the same time, the company dropped its department of management data-processing peripherals, which was given to Transac, a business of the CGE group in which Sintra now holds about 23 percent of the capital. Sintra had also received a 51 percent participation in Compagnie Generale d'Automatisme

(CGA). But CGA very recently moved to the United States, resulting in money requirements that were met by increases in the capital supplied by the CGE group, to which Sintra did not subscribe: its share in CGA consequently dropped to 36 percent.

Subsidiary of the Cit-Alcatel Group

It should also be pointed out that in 1977, the CGE group took control of Sintra through purchases on the Bourse, and by a public offering of exchange against Cit-Alcatel shares. Up to then, the capital was held by the founders, the public, and Banque Vernes, the latter of which still indirectly holds 5.4 percent of the shares.

The sales and orders of Sintra Alcatel are distributed among the following activities:

In 1981, military systems for data processing and display accounted for 29.4 percent of the turnover and 37.9 percent of the orders;

Submarine detection represented 19.3 percent of billing and 31 percent of the costs;

Telecommunications and industrial controls amounted to 44.3 percent and 27.6 percent, respectively;

Microelectronics contributed 5 percent of sales and 3.5 percent of orders;

And lastly, 2 percent of the 1981 turnover was composed of carryovers from terminated activities.

Activity Oriented Toward Weapons

The customers of Sintra Alcatel consist of: 53 percent national defense, 13 percent civilian administrations, 25 percent private sector, and 9 percent exportations. Military activities are thus in the majority and are tending to increase, as shown by an examination of the company's orders, in which submarine detection and military systems are playing a growing role.

Here are a few examples to better define the activity of each Sintra Alcatel department.

In military systems, information must be processed to directly operate weapons or to assist in decisions. That is how Sintra has built France's air defense network, Strida.

In submarine detection, the design and construction of weapons systems heavily depend on the mastery of submarine acoustics technology. One-half of these products are exported.

Telecommunications and industrial controls include the linking of all subscribers to a network, whether stationary or mobile, such as Lirsac (integrated radio-telephone linkage with automatic channel selection), the military program Rita (integrated automatic communications network), electronic telex screen terminals (Sintra is studying the future terminals for the PTT teletex), as well as industrial remote control systems (for nuclear power plants), and black and white or color display systems (whose major uses are computer-aided design, or image processing for weather or earth resources studies).

Microelectronics Specialist

Sintra Alcatel's microelectronics is oriented primarily toward thin film hybrid microelectronics, with modules designed to be used under very adverse conditions (weapons, aerospace), having received RAQI certification from the industrial control service for weapons.

The technologic level achieved by Sintra's microelectronics department allows it to be used as support for new developments such as flat-screen research. It represents an important potential for the company, both through its sales possibilities, and through the support that it can provide to other departments of the enterprise.

20-25 Percent of Turnover for Research

The research policy is an important element of Sintra Alcatel's strategy. The total expenses in this area absorb 20-25 percent of the turnover, and the portion fully supported by the company represents 5-6 percent of this same turnover, namely a good 50 million francs in 1981. The remainder are study contracts or internal studies partially financed by public agencies.

Sintra employs nearly 600 people in research, split evenly between technicians and engineers. A close cooperation is obviously maintained with CGE's other laboratories and research organizations.

The company indicates the directions of its research effort. Flat screens is one of these orientations; the work is conducted along two paths: liquid crystal screens being studied for the AEC, and electroluminescent screens, developed in cooperation with the Finnish company Lohja.

Another important orientation is the work being carried out on ceramics and transducers for submarine warfare. And a last direction is signal and information processing, as well as the management of large data bases, which has already led to concrete applications in the area of information retrieval by telephone.

One Billion in Billing

Comparisons of financial results over a long period of time have no significance because of the intervening structural changes that have taken place. Last year, turnover increased by one-third, with 822 million. It should increase again this year, and hover around one billion francs. The increased number of orders should lead to a continued expansion: from 1320 million at the end of 1980, these orders have grown to 1787 million at the end of 1981, and should reach 2 billion by the end of the current fiscal year if the circumstances remain favorable.

Profits did not keep up with this expansion. In 1981, operating profits stagnated around 32 million, and net earnings were slightly over 17 million, at a margin barely higher than 2 percent.

Despite this, income surpluss above expenses had followed the billing curve with more than 95 million against less than 70 million in 1980. But financial costs increased heavily, from 18.3 million to 41.3 million. This is thus one more company which pays its bankers an amount of money amounting to more than twice its net profit. An increase in depreciation (27.7 million against 16 million), which is healthier for reflecting the investment effort, has also helped reduce the declared profit.

Weight of Financial Costs

It should however be pointed out that the soaring financial costs result in large measure from preparations for the future. Sintra works in industries with long manufacturing processes. Future increases in turnover require first of all a growth in stocks and works in progress. All of which must be financed at a particularly high cost in these days of expensive interest rates.

This effort could have been endured if the profitability of the business had not been sapped by the cost of a fifth vacation week, a one-hour reduction in the work day, a rise in the dollar which raises the cost of some supplies, and this year, by price freezes and a one percent increase in TVA (added-value tax), whose load is supported by the enterprises. As last year, the 1982 results should therefore show a stagnation.

In the future, due to its standing in France, to a determined exportation policy, and to a good record of orders, Sintra Alcatel stands a chance to see a good expansion, and to improve its profitability. The 1981-1982 period then appears as a transition period.

The end product of the convertible obligation issue should allow the company to boost its operating fund, resulting in a relative reduction of financial costs. Sintra will also have to garner investment means. Including the sums--minimal ones, actually--devoted to participations, investments have represented 16 million in 1979, nearly 50 million in 1980, and 30 million in 1981. The microelectronics production center of Marcq in Baroeul, cost 25 million by itself.

Choppy History on the Bourse

Sintra's rather favorable prospects after years devoted to preparing for the future, together with the secrecy which surrounded the business, explain the ups and downs of its history on the Bourse. Sintra shares, starting at below 300 in 1978, reached 870 in 1980, before falling back down to 317 following the elections of May 1981. Since then, their value has followed a sawtooth curve which has now brought them back to more than 500, a value at which--if maintained--the subscribers to the convertible obligations would already be making a profit.

11,023
CSO: 5500/2544

TELEPHONE ORGANIZATION PROBLEM INVOLVES THOMSON, CGCT, ALCATEL

Paris ELECTRONIQUE ACTUALITES in French 5 Nov 82 pp 1, 12

[Article by D. Levy]

[Text] The nationalization of CGCT (General Company for Telephone Construction) and the reluctance of Mr Gomez, president of Thomson, to continue its public telephone switching activity, once more create a restructuring problem for the French telecommunications industry.

Fundamentally, PTT is sticking to the principle of two major suppliers of public telephone exchages while realistically welcoming the idea of a CIT/Thomson association for the development of the next generation of exchages. The Ministry of Research and Industry seems to have now accepted this PTT viewpoint, after having temporarily leaned toward an immediate regrouping of the public telephone switching activities of the two nationalized companies. But who will be the second supplier along with CIT-Alcatel?

There is little use in feeling sorry for CGCT, considered only a few years ago as one of the glories of our telecommunications industry. Had it not perfected two remarkable telephone systems, and did it not claim the title of foremost French exporter of exchanges? To be sure, the company was functioning as part of the ITT group and benefited from all its logistics; but in practice, it used this strong support only for exportation.

It would be futile to seek the causes for CGCT's decline. Lack of imagination or daring on the part of its leaders in an indispensible diversification policy? Paralyzing centralized direction from an administration that qualified as "employment blackmail" the true questions raised by technologic change? Attraction-repulsion phenomenon for an enterprise whose technical opinions often clashed with those of the administration? In fact, it is on one hand the sudden swerve of DGT (General Directorate for Telecommunications) toward time-switching in 1978, and on the other hand the political wish to remove ITT from the strategic area of telecommunications, which have locked CGCT within its present structure, without recourse (the adoption of System 12 could have been justified only by the failure of one of the two French time-switching systems).

First Remedies for CGCT

As we had indicated, the nomination of Mr Lestrade to the CGCT presidency was to have been only temporary (see ELECTRONIQUE ACTUALITES, 15 and 22 October). The former telecommunications director for Ile-de-France undertook as his main task to obtain from the inside a real inventory of the company, and to evaluate its actual potential, so as to open new directions for the company's reorientation.

In a report just delivered to Messrs Chevenement and Mexandeau, Mr Lestrade is already indicating the first desirable measures for purging the company and restoring its credibility. In particular, he feels that CGCT must know very soon, "in the next few weeks," which of the time-switching systems--E-10 or MT--it will be authorized to manufacture; that the company's financial situation must be restored (one billion needed within three months and another billion in three years, to assure expansion and coverage of deficits); that a positive balance of orders must be re-established (by receiving 1.5 billion in orders from PTT in the next six months); and that CGCT must become involved once more in the electronics field (new products, notably in teletex and videotex for CGCT, and in teledistribution installations for La Signalisation).

Other measures leading to a new strategy for the enterprise will be formulated within three months by Mr Lestrade and his successor (the name of Mr Magnin, former director for public telephone activities at Le Materiel Telephonique (LMT), is being mentioned).

Seeking the Second Source

Whatever happens, it will not be possible to separate the future of CGCT from that of the other two suppliers of exchanges, CIT-Alcatel and Thomson-CSF. As it stands, neither of them is in a position to withstand an automatic absorption of 3500 to 4000 employees from CGCT's public telephone switching department (we can consider that the rest of the enterprise, namely 2000 persons in the private telephones division, has a sufficient work load, if only its line of equipment were to be updated).

CIT-Alcatel has just reached an agreement to reduce its work hours in order to absorb part of its overstaffing in switching, estimated at 1650 people (see ELECTRONIQUE ACTUALITES of 29 October). But if this measure makes it possible to strengthen the competitiveness of the enterprise through optimum utilization of production resources, the manufacturer knows very well that the measure is not sufficient, and that it will have to find other solutions to salvage about one thousand jobs that are still threatened. The lower volume of PTT orders can be compensated on foreign markets only with difficulty, despite annual contracts adding up to nearly 2 billion, and record orders such as the one from India (3 billion). Not to mention CIT-Alcatel's prodigious productivity gains (the company currently makes three E-10 exchages per week!).

The reassignment by decree, of 3500-4000 people from CGCT--even with its 15 percent PTT market--risks spraining a mechanism that has been perfected with difficulty, and that is precariously balancing its results.

Thomson-CSF cannot do the same, and the public telephone switching department of the group will announce for the second consecutive year, losses that will probably persist into next year to reach one billion francs over three years. In fact, Mr Gomez was ready to drop this activity (2.5 billion in business expected for this year) in favor of an extensive merger with CIT-Alcatel, to form Telephone de France. This is a project which PTT has fortunately strongly opposed. At the same time, the president of Thomson was asked to reconsider the future of its public telephone switching activities, not for the short term, but as part of a synergy with the group's other activities.

Nevertheless, Thomson--which has already made considerable efforts in the very expensive restructuring of LMT and STE into Thomson-CSF Telephone, and in the development of the MT-20, estimated at 2 billion--cannot be asked to pursue an activity agaist its will. And yet, the opinion of industrial specialists is that this activity could rapidly become profitable again, as long as the company follows a dynamic exportation policy, now that all the technical problems have been solved for the product line.

Two possibilities are being considered should Thomson prove reticent. The first consists in the production of exchanges "coordinated" with the needs of PTT." In other words, the activity of the group would become that of a production shop for PTT. The second possibility would lead to the formation of a company combining the public telephone switching of Thomson and CGCT, with the contribution of CII-HB, under Thomson's wing. In both cases, PTT would have a second source along with CIT-Alcatel. However, there are those at the ministry who do not conceal their preference for a European alliance. And we have noted that Mr Delors, minister of economy and finance, reopened the subject of an industrial cooperation in information technologies, at the penultimate French-German summit meeting. But that is another story.

11,023
CSO: 5500/2543

TRANSPAC NETWORK DOUBLES IN SIZE; NEW 1983 SERVICES PLANNED

Paris ELECTRONIQUE ACTUALITES in French 5 Nov 82 p 14

[Unsigned article]

[Text] The Transpac network has nearly doubled its size in one year, and currently has more than 8000 connections in service (more than 7000 direct-access, with additional telephone network and telex accesses). In addition, subscriber traffic is growing significantly.

In order to face this strong growth in demand, Transpac is accelerating the rate at which it is expanding its capacity. Three new switches are being installed, on one hand to double the capacity of Paris switches (Paris-Archives and Paris-Beaujon), and on the other to open a new location in Nice. The network linkage is considerably reinforced by the creation of new internal connections.

At the same time, Transpac is opening new services and new access capabilities. For instance, 1200 bits/s access through the switched telephone network was progressively placed in service during the entire first half of 1982, and this new service is now accessible from all points in the country.

In addition, the 1983 opening of X 25 access to Transpac at 2400 and 4800 bits/s through the switched telephone network, was just announced. This new service will meet specific application needs, such as: perfecting the X 25 interface by its manufacturers, using the telephone network; portable or low utilization terminals; demonstrations by custom remote-processing companies; demonstrations during conferences, seminars, fairs, exhibits, and so on; and assistance for specialized connections for Transpac access.

Finally, as part of the professional Teletel service, videotex access points make it possible to connect those who provide services, through the telephone network. Access points are open in Paris, Marseille, Lyon, and ten other large cities.

11,023
CSO: 5500/2543

SAT GAINS CAPITAL, INCREASES RESEARCH, NEW PRODUCT DEVELOPMENT

Paris ELECTRONIQUE ACTUALITES in French 5 Nov 82 p 26

[Unsigned article]

[Text] SAT (Telecommunications Company) of the G3S group has achieved a capital growth which will bring in 50 million francs. The company is thus providing a financial basis for the asset expansion that it has been pursuing in recent years.

Since 1980, SAT has spent more than 90 million to acquire a share in Tonna Electronique of Reims, as well as in Interconnect Planning Corp and General Optronics of the United States. On the other hand, SAT's increased interest in in Silec (Industrial Company for Electronic Connections) up to a little more than 50 percent, was paid mainly through the issue of new shares in the company.

Henceforth, SAT has a much stronger position in all its areas of activity, and is in a position to prepare the technical revolutions that are beginning.

In cable technology, control of Silec gives the company a new dimension, and will ease the transition to fiber optics.

In aeronautics and space technologies, General Optronics brings its competence in semiconductor diode lasers and their applications. The company can thus bolster its infrared optronics specialization, with its many and promising military applications.

In telecommunications, teledistribution, and telematics, SAT will benefit from the support of Interconnect Planning to distribute its equipment in the United States; this American company is a preferred supplier of telephone exchanges to Wall Street financial institutions. SAT is also placing large expectations in audiovisual cable networks: Tonna Electronique could also help it become active in the mass market.

SAT is intensifying its research efforts and launching new products in all areas. It thus appears to successfully compensate for the reduction in PTT orders for conventional equipment. Most of its activities concern weapons and telecommunications, which presently offer the best growth prospects.

SAT's financial results are beginning to reflect the first fruits of the company's efforts. The operating profits, which had dropped from 74 million in 1979, to 38 million in 1980, were back up to 59 million last year, despite heavier costs. In 1982, the parent company should obtain results of the same magnitude as those of last year.

But the entry of Silec into the group will likely increase the absolute value of the consolidated profits in terms of value per share. Many financial analysts believe that given the good conditions under which control of Silec was obtained, this profit per share stands a chance of exceeding 40 francs, or more than 50 million, instead of some 30 francs.

SAT thus seems to be rising out of the slump. But it has not yet found on the French stock market the growth stock status that it had earned until the end of the 1970's, at the time of the development of the telephone in France.

11,023
CSO: 5500/2543

FRANCE

BRIEFS

PTT VIDEOCOMMUNICATION PROJECT--Between now and the end of 1986, the PTT [Postal and Telecommunications Service] plans to offer 1.5 million French households access to videocommunication services, it was reported at the PTT ministry on Saturday. However, this project is still subject to budget allocations, and is only one aspect of the report on cable videocommunication networks which will be submitted to the prime minister on 15 October. These networks, which use optical fibers which have been tested with success at Biarritz for several years, can transmit either sound, images, or data. Just like the telephone, they are interactive, which means that pulses can travel in both directions. This will mean opening up each household to direct cable television service, which will be able to receive the programs broadcast by satellites at the end of the decade under the best possible conditions. It will also provide access to data banks, to information systems of the Velizy type, and to the entire range of telephone services: videoconference, telecopy services, etc. The PTT would like to begin this ambitious project in 1983 by equipping 100,000 households, then 300,000 the following year, and over a million in 1985, with the goal being cable connections for over half of France in 1995. [Text] [Paris LES ECHOS in French 4 Oct 82 p 7] 7679

CGE'S INDONESIAN TELEPHONE LINK--After the close of the international call for bids issued in November 1981, two companies belonging to the CGE [General Electric Company] group, Cables de Lyon and CIT Alcatel, working together in the joint division, SUBMARCOM, have been chosen to develop the submarine telephone link between Medan, Indonesia, and Singapore. Also responding to this call for bids were the NEC of Japan and STC of the United Kingdom. The contract is for 220 million francs. The system selected is the S12 designed by CIT Alcatel in association with Cables de Lyon. The submarine cable will be laid in 1984. This is the first section of a cable now under study which would connect Europe and Asia via the Red Sea and the Indian Ocean. [Text] [Paris LES ECHOS in French 18 Oct 82 p 9] 7679

CIT ALCATEL'S PRODUCTION EQUIPMENT--CIT Alcatel plans to discontinue production of some of its equipment, including the K6 wiring machine and its component insertion machine, but the company's equipment department will continue to produce machinery intended for inhouse use, such as wiring equipment and testers. This equipment is used to produce equipment for "ready for use" plants. This decision, which was apparently made at top levels of the CGE [General Electric Company], is allegedly caused by an imperative of a commercial nature: the company does not have an adequate commercial structure to handle the marketing of all its equipment. Before the end of 1982, the situation should be clear, and the discontinued products should have been transferred to a number of PMI [Small and Medium Industries]. A number of such companies are reported to be interested. ITS [expansion unknown] might take over from CIT Alcatel its representation of the laser resistance adjustment equipment for the U.S. firm, Chicago Laser Systems. The other equipment--the K6 machine and the component insertion equipment--will be manufactured by other companies. The firms chosen should be announced quite soon. The companies under consideration have excellent qualifications for handling the development of this type of equipment. Their experience ranges from the production and improvement of component insertion machines to the development of software for their control. [Text] [Paris ELECTRONIQUE ACTUALITES in French 15 Oct 82 pp 1, 15] 7679

CSO: 5500/2521

GREECE

PLANNING CONTINUES FOR CONNECTION WITH EURONET-DIANE SYSTEM

Athens OIKONOMIKOS TAKHYDROMOS in Greek No 40, 7 Oct 82 p 20

[Article by A. Papandropoulos]

[Text] "According to statements made by the premier, soon our country should be establishing the prerequisites for being able to closely follow technological developments. Within this framework, both the Ministry of Research and Technology and the appropriate services of the OTE [Greek Telecommunications Organization] are taking suitable actions to expedite the linking up of the country to the European network EURONET-DIANE. We hope that all this preparatory work will have been finished in the next 2 or 3 months, so that within the first 3 months of 1983 at the latest this link-up will be a fact." This was stated to us by Minister of Research and Technology G. Lianis, who added that with the help of financing from the United Nations, Greece is forming a prototype data bank, whose objective will be precisely its use as a foundation for the furthering of technological research.

In addition, G. Lianis stressed to us that very soon joint Greek-French investments will be realized in the sector of research and technology, and also the mixed enterprises appropriate to this purpose will be created. "The desire of Premier Andreas Papandreou is to push forward on the processes for the acquisition of technology, and from this point of view the protocol on cooperation with France which was signed during the stay in Greece of French Minister of Industry and Technology Chevenement is definitely a positive step," Professor Lianis stressed to us.

The EURONET Community System

"In the face of the headlong 'invasion' of electronic computers into all levels of social and economic life," we wrote earlier in the pages of the OIKONOMIKOS, the European Community has tried to keep up with events by creating a European network for the transmission of knowledge and information which bears the name EURONET-DIANE.

This is a system which, although still incomplete with respect to the amount of its "stored" information, provides the opportunity to its subscribers, in whatever area of the EEC they are located, to obtain the information which they seek simply by picking up the receiver of their telephone. And this at a unit price of an ordinary phone call.

The entire system is connected to "terminal" stations (that is, to subsidiary data banks) which are installed in various European cities (Brussels, Copenhagen, Dublin, Luxembourg, Rome, and so forth) and which serve the interested parties which are hooked up to these.

Thus, a subscriber to EURONET-DIANE in London needs only to pick up his phone receiver to obtain information on any matter concerned with scientific, technical, economic, or other activities. This system transmits the given query by way of a telecommunications junction which relays it to "receivers" which are hooked up either to the memories of computers or to national "information banks."

The former provide only brief statements on the sources from which the information can be obtained, while the "banks" give the information proper. This network also offers a very broad selection of articles, books, lectures, and studies connected with the topic inquired about (with dates, titles, addresses), with these applying to aerospace, agriculture, veterinary medicine, to all branches of mechanics, electronics, medicine, biology, ecology, chemistry, nuclear physics, and so forth.

On the other hand, substantial efforts are being made in Brussels to enhance the EURONET-DIANE system with specialized business and stock-exchange information, which the business world of the EEC will have direct access to at an insignificant cost. Based on what was said to us by Community leaders, the price for this information is exceptionally low--something which undoubtedly will facilitate access for small and medium-sized businesses to sources of information which have been inaccessible up to now.

At this point it should be emphasized that a large data bank is in operation also at the EOMMEX [Organization of Private Means of Transportation], but this is not very well known to the broad public.

Therefore, from the preceding it becomes obvious that the decision of the government on being linked up to the European system EURONET constitutes an entirely positive action--an action which we had recommended and proposed in these very pages precisely 26 months ago.

12114
CSO: 5500/4704

FOREIGN FIRMS SEEK SHARE IN DIGITAL EXCHANGE CONTRACT

Oslo AFTENPOSTEN in Norwegian 19 Nov 82 p 4

[Article by Knut Lovstuhagen]

[Text] Kongsberg Vapenfabrikk has reached an agreement with the big Japanese concern Nippon Electric Company (NEC) and the French CIT-Alcatel to assist them in preparing the industrial package part of bids submitted on digital telephone exchanges amounting to around a half billion kroner to the Telecommunications Agency. If one of the two gets the contract, Kongsberg will also try to assist that company to set up a production cooperation with either Elektrisk Bureau or Standard Telephone and Cable. Kongsberg Vapenfabrikk is not interested in taking on the entire coproduction job, but it would like to produce the computer electronic part of the digital telephone exchanges.

By 30 December five firms will have submitted bids on digital telephone exchanges that would expand the telecommunications network in this country. These are the traditional Telecommunications Agency contractors, Elektrisk Bureau and Standard Telephone and Cable, the Canadian Northern Telecom, NEC and CIT-Alcatel. This is the first time the Telecommunications Agency has asked for international bids on heavy telecommunications equipment, following a government resolution. Seven firms originally indicated interest in participating in the competition for this big order, but both Siemens and Philips have withdrawn. The government has made it a condition that if the contract goes to a foreign company, that company will establish industrial activities in Norway of the same size as would have been the case if one of the traditional contractors had been awarded the contract.

For a number of years Northern Telecom has worked closely with the Oslo firm of Gustav A. Ring and would be able to utilize this resource to build up the necessary production apparatus in Norway if it is awarded the contract. This is an advantage neither NEC nor CIT-Alcatel has and it would be difficult for them to establish on their own the apparatus needed within the strict time limits involved. Both have made overtures to EB [Elektrisk Bureau] and STK [Standard Telephone and Cable] to discuss possible forms of cooperation, but so far without success. EB and STK are quite confident that they will be able to land the big order themselves.

"If it turns out that the contract goes to NEC or CIT-Alcatel, we will try on behalf of the firm selected to set up a cooperation with EB or STK so that the resources released in this country can be used for the production of the digital telephone exchanges," said firm development chief Olav Berdål of Kongsberg Vapenfabrikk in a statement to AFTENPOSTEN.

Isn't Kongsberg itself interested in this job?

"We are a computer firm and have no desire to become a new telecommunications firm. But we would like to produce the computer electronic part of the telephone exchanges."

Norsk Data is also within the sphere of interest of the Japanese and French firms in this context. But according to what AFTENPOSTEN has learned, Norsk Data has big reservations about entering into cooperation if it is just a question of licensed production. The starting point for cooperation would have to be a transfer of technology.

The order the Telecommunications Agency has requested bids on covers digital exchange equipment for 500,000 subscribers. The plan is that in the fall of 1983, Storting will authorize the department to order the equipment from one of the five potential suppliers. The contract will probably amount to around 500 million kroner. The plan is that the two first exchanges will be put into operation during the summer of 1986.

6578
CSO: 5500/2549

BRIEFS

TELEDATA FIRM FORMED--A newly formed company, Swedish Telepicture Co. will begin operating with so-called teledata. The intent is mainly to offer commerce and industry information from various sources. Around the first of next month the Telecommunications Agency will open the Datavision communications network to such teledata activity. Part-owner of the new Telepicture Co. will be Teleinvest, the Programator Group of the Ericsson concern, SVENSKA DAGBLADET Co. and Goran Asplund Co. /Text/ /Stockholm DAGENS NYHETER in Swedish 30 Sep 82 p 8/ 11949

CSO: 5500/2539

END